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An Address
ON
THE OPERATIVE TREATMENT OF THE CONDITIONS OF THE GASTRO-INTESTINAL TRACT WHICH RESULT FROM CHRONIC CONSTIPATION.

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SURGEON TO GUY'S HOSPITAL AND SENIOR SURGEON TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

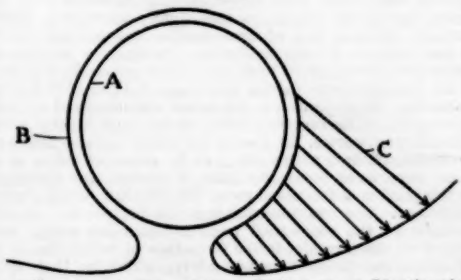
GENTLEMEN,—In this address I propose to consider in a detailed manner the causation, pathology, symptoms, and treatment of the changes in the gastro-intestinal tract which result from, and are associated with, the habitual over-loading of the large bowel. Let us commence by analysing the several *structural alterations* which are present in cases of this sort. They differ somewhat in the several portions of the alimentary tract. The first we will consider is an increase of the calibre of the bowel or its dilatation.

Dilatation with corresponding lengthening is a very marked feature in certain portions of the intestine. For instance, the cæcum becomes much elongated and its lumen considerably increased. In consequence its lower extremity reaches finally the floor of the true pelvis, which cavity it may fill. The transverse colon becomes lengthened and dilated. In advanced cases it forms a loop, the lower limit of which reaches to or below the brim of the pelvis where it comes into relationship with the displaced cæcum. The rectum becomes abnormally enlarged and in operative procedures more freely accessible from above than under normal conditions. The small intestines are dilated, this characteristic becoming more noticeable as the cæcum is approached. In some cases the stomach shows an inclination to dilatation.

Fixation with a corresponding atrophy of the muscle coats of the wall of the intestine is especially marked in the upper part of the cæcum, ascending colon, hepatic flexure, and in the splenic flexure and sigmoid flexure; indeed, in every portion of the large bowel except the bulk of the cæcum and the entire transverse colon. This fixation is brought about by a gradual process of anchoring of the outer aspect of the upper part of the cæcum, of the colon, and of the meso-sigmoid and sigmoid flexure to the peritoneum lining the adjacent abdominal wall. This may progress to such an extent that a considerable proportion of the peritoneal covering of the large bowel becomes adherent to the adjacent peritoneum, the area of bowel covered by normal peritoneum becoming in consequence progressively less. In a very small proportion of cases the sigmoid flexure, instead of becoming shortened, atrophied, constricted, straightened, and fixed, becomes very much elongated, dilated, hypertrophied, and more mobile than normal. A certain amount of obstruction to the passage of fæces from the sigmoid flexure into the rectum is usually present in these cases, since when sufficiently elongated the loop of necessity twists on itself. It is in these exceptional cases that complete intestinal obstruction results owing to the twist or rotation of the overloaded elongated loop becoming sufficient to close completely the passage of material from the sigmoid loop into the bowel beyond. It will thus be seen that the so-called volvulus of the sigmoid flexure occurring spontaneously and not as an after-effect of an abdominal operation is a phase of a condition of partial obstruction of long standing, the loop being habitually over-distended with intestinal contents and the passage of fæces beyond interfered with. I do not think that acute volvulus ever occurs spontaneously or that a perfectly normal sigmoid flexure can suddenly become twisted so as to form an immediate obstruction. The same remarks apply with equal truth to volvulus of the cæcum.

I have in Figs. 1 and 2 represented diagrammatically this process of progressive fixation of the large bowel which takes place in a very large proportion of cases. The first figure represents a transverse section of the ascending colon or of the upper part of the cæcum seen from above, the line B indicating the peritoneum covering the gut and the adjacent portion of the abdominal wall external to it, while the line A shows the position of the muscular and mucous coats. The arrows C show the direction in which fixation takes place, the adhesions beginning at the reflection of the mesentery from the outer wall of the bowel. These adhesions may exert such

FIG. 1.

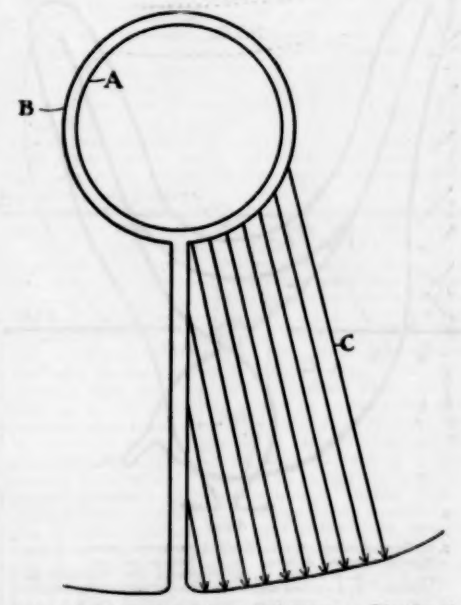


A, Muscular and mucous coats. B, Peritoneum. C, Direction of adhesions.

a strain on the bowel as to reduce its calibre very materially, especially at certain points. This is much exaggerated by any distension of the bowel below a constriction and may be so great that the intestine becomes occluded at this point. Such a condition of obstruction not infrequently exists in the large bowel on the right side at the level of the iliac crest where the abrupt change from a firm bony relationship to that of a flaccid muscular wall renders the production of a kink more easy.

Fig. 2 represents a transverse section through the sigmoid flexure and meso-sigmoid and the peritoneum covering the iliac fossa external to the meso-sigmoid. As in the last

FIG. 2.



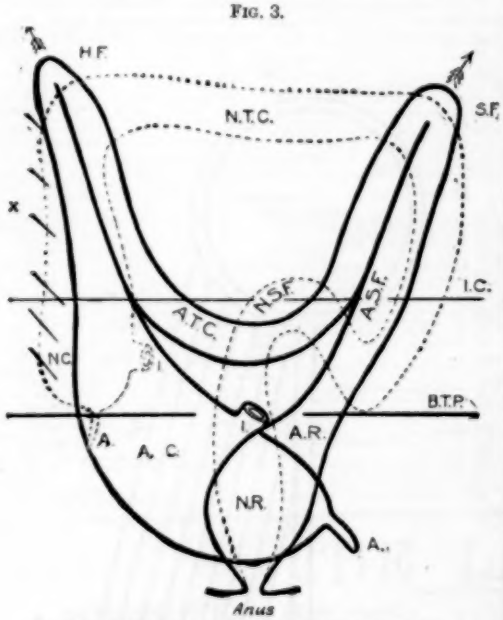
A, Muscular and mucous coats. B, Peritoneum. C, Direction of adhesions.

diagram the line B indicates peritoneum and the line A the bowel. Owing to the possession of a mesentery of some considerable length the bowel is at a much greater distance from the abdominal wall than the cæcum and ascending colon which are immediately adjacent to it and the mode of fixation differs somewhat in detail from the last described.

In the conditions I am describing the outer surface of the mesentery is gradually brought down to its base by the formation of adhesions till the surface of the sigmoid flexure is fastened to the floor of the iliac fossa. Afterwards, this portion of bowel becomes attached progressively to the adjacent peritoneum just in the same manner as in the case of the cæcum and ascending colon. The mode and direction of the formation of these adhesions are represented by arrows C. Associated with the gradual fixation of the sigmoid loop there is an accompanying diminution of its lumen and of its length, so that finally the bowel which normally forms a loop of considerable size moving freely at the end of a long mesentery, becomes a shortened, straightened, constricted tube attached by a considerable area of its circumference to the abdominal wall, as if it had no mesentery. In proportion as the bowel becomes fixed and unable to perform its functions with freedom and facility so its muscular coat wastes. This state of fixation and shortening of the sigmoid flexure with wasting of its muscular coats is of great importance surgically since it renders any operation on this portion of the bowel more difficult than under normal conditions. The strain exerted upon the hepatic and splenic flexures by the overloaded cæcum, ascending colon, and transverse colon results in the formation of broad bands of adhesions amounting to a mesentery, which by their contraction drag these flexures upwards and outwards beyond their normal positions, producing kinking of the bowel at the flexures. This is much more marked at the hepatic than at the splenic flexure because of the heavier load sustained there and of the greater abruptness of the angle existing between the ascending colon and the transverse colon.

Again, where the surfaces of the ascending colon and descending colon come into apposition with the transverse colon adhesions form and this further interferes with the passage of material through the lumen of the bowel already constricted at the flexures. This is shown in Fig. 3.

FIG. 3.



N. C., Normal colon. N. T. C., Normal transverse colon. N. S. F., Normal sigmoid flexure. N. R., Normal rectum. A. C., A. T. C., A. S. F. and A. R. represent the alteration in position. X, Acquired adhesions forming false mesentery.

Fig. 3 represents diagrammatically many of the changes which the large bowel undergoes in consequence of the habitual interference with its functions by constipation. The normal condition is shown as a dotted line while the firm outline illustrates the modifications which take place in consequence of habitual overloading. N. C., N. T. C., N. S. F., and N. R. indicate what may roughly be regarded as the normal cæcum, transverse colon, sigmoid flexure, and rectum; while A. C., A. T. C., A. S. F., and A. R. represent these parts in their altered state. B. T. P. and I. C. show the lines of the brim of the true pelvis and of the iliac crests. The appendix is left free from adhesions or deformity so as not to render the diagram too complicated. The adhesions which form between the appendix and the adjacent portion of the iliac fossa are situated external to it. They commence at the cæcum and gradually extend along the length of the appendix, seldom reaching beyond the junction of its middle and outer thirds. Though the process of adhesion commences at the cæcum from above downwards the length of the band diminishes and its strength increases. The adhesions are quite distinct from, and lie external to, the mesentery of the appendix. The result of this arrangement is that when the cæcum is loaded the strain it exerts upon the proximal portion of the appendix causes that structure to become flexed abruptly at the lower limit of its adhesions. For the time being its lumen is reduced or occluded at the junction of the distal and mobile portion with the fixed proximal part, the secretions of the former being dammed up and producing an inflammation of varying intensity. The constant recurrence of obstruction to the escape of the excretions from a greater or shorter length of the appendix may lead to the formation of a calculus.

Though the above is a very common mode of attachment of the appendix there are, however, other varieties. For instance, if the distension of the cæcum occurs at an early period of life before its descent in the abdomen to the situation it occupies later the much elongated appendix may lie vertically behind the ascending colon and cæcum, its upper extremity reaching high up into the loin posteriorly, being fixed by, and involved in, the acquired adhesions which bind down the outer wall of the ascending colon and cæcum to the abdominal wall. Or, again, the appendix may not have acquired any adhesions till the cæcum has been forced down on to the floor of the true pelvis where it may become attached to any structure in the vicinity. This is especially the case if any abscess has formed about it. The chief factor which determines these several changes is an overloading of the large bowel and of that portion which serves more especially as the cesspool of the gastro-intestinal tract—namely, the cæcum and ascending colon. The excessive distension of this portion of the tract results very largely from the erect or sedentary posture habitually assumed during the greater part of the 24 hours in civilised communities. This is exaggerated in the woman by the constriction of the waist and in both sexes by the imperfect development of the muscles in the abdominal wall. Even in the act of defecation in our present state of civilisation the cæcum is driven downwards and forwards into the true pelvis, tending to drag and displace downwards the right kidney, the individual losing in the sedentary position the enormous pressure afforded by the forcible apposition of the thigh and abdomen which is exerted when the squatting position of uncivilised life is assumed. Not only does this squatting posture help to empty the cæcum and ascending colon but it tends to retain both directly and indirectly the kidney in its normal relationship. It also serves to displace the sigmoid flexure upwards and facilitates the evacuation of its contents. In savage life the postures are infinitely more varied; the recumbent and squatting attitudes are habitually assumed, the latter being rendered impossible by the exigencies of civilisation. In India and elsewhere the squatting posture is employed during micturition. In a large proportion of these cases of constipation the kidneys are mobile; indeed, in many of the cases I have operated on for chronic constipation one or both kidneys had been previously fixed by the operation of nephrorrhaphy. The kidneys are rendered more or less mobile by two factors. One is the strain exerted upon them by the ascending colon and cæcum or by the transverse colon at the splenic flexure, and as the drag exerted on the right kidney is much greater than that experienced by the left one the mobility of the former organ is correspondingly greater.

The second factor in determining and facilitating the displacement of the kidneys is the *absorption of fat*, which I shall show later to be a direct consequence of the auto-intoxication produced by the intestinal obstruction.

We will now consider the clinical symptoms which are associated with the mechanical conditions I have described. In the first instance, I think we may assume that the earliest factor in the determination of the delayed functioning of the gastro-intestinal tract is what is commonly called

indigestion or the altered condition of the intestines which results from improper feeding. This by diminishing the general energy and the respiratory capacity assists in reducing progressively the ability of the several portions of the body to perform their normal functions and so impairs still further the manner in which the drainage apparatus of the human animal performs its work. Indeed, *indigestion* in one form or another may be regarded as a frequent concomitant of delayed and obstructed drainage whilst that condition exists. The frequent distension of the cæcum, ascending colon, transverse colon, and subsequently of the small intestines produces a feeling of illness, inactivity, nausea, vomiting, flatulence or pain which are in part due to the local distension determining a reflex upset of the whole tract and partly to the toxic influence exerted by the ptomaines absorbed by the mucous membrane. The patient experiences considerable discomfort, tenderness or pain over the cæcum and ascending colon. This may extend downwards and inwards over the middle line into the true pelvis. Associated with this pain there are pain and tenderness below the last rib on the right side and often along the distribution of the ilio-inguinal and ilio-hypogastric nerves. This local pain in the loin with the pain reflected along the nerves, both of which simulate very closely the pain of stone in the kidney, has very frequently led surgeons to explore the right kidney. Finding nothing to account for the pain the surgeon has been disappointed but frequently the patient has for a time been relieved. This amelioration of symptoms the surgeon has easily explained on the principle that an operation on the abdomen, though apparently unsuccessful, often does good by morally impressing the patient. In this case, as in most others, there is no necessity to draw on one's imagination since the procedure necessary to explore thoroughly the kidney liberates the tension exerted by adhesions and bands at the hepatic flexure and so frees the patient for a longer or shorter period from the obstruction, the real cause of the symptoms. The pain immediately below the last rib is due partly to the drag exerted upon this area by the adhesions when the patient is in the erect posture and when in the supine posture from the backward thrust of the upper extremity of the distended bowel. The same traction exerted upon the last dorsal, ilio-inguinal, and ilio-hypogastric nerves accounts for the reflex pain described which simulates renal irritation.

A little consideration of the mechanics of the big bowel shows that while the cæcum and ascending colon have great difficulty in passing on their contents in the erect posture their evacuation is very much facilitated by the assumption of the supine position and this may be increased still further if the pelvis is raised by elevating the foot of the bed. The easier passage of the fæces from the cesspool in the supine posture probably accounts for the morning evacuation of civilised life. The distended cæcum when it fills up the true pelvis produces a dull pain over the sacrum extending from the right sacro-iliac joint. This pain is much exaggerated during defecation and gives the patient a feeling of an obstacle which he cannot overcome. The straining simply drives the large engorged or inflamed cæcum further downwards into the pouch of Douglas and makes matters worse. In a large proportion of cases the patient is unable to lie on the left side owing to the drag exerted by the loaded cæcum. The transverse colon in some instances produces considerable discomfort or pain. Its position can readily be defined by the hand, as it descends to the brim of the true pelvis. When the splenic flexure is obstructed the patient complains of a griping pain along the course of the ascending limb of the loop formed by the distended and elongated transverse colon and of a dull aching pain in the left loin about the last two or three ribs. This last pain is produced by the drag and the thrust I have just described in the case of the hepatic flexure. The fixed and shortened sigmoid flexure is often very tender on pressure and can be readily felt and defined in its abnormal situation. Severe pain may be complained of during the passage of fæces through it. The abdomen is fuller than it ought to be and a little careful manipulation shows the presence of a quantity of fluid in the small intestine and particularly in the ileum. This material accumulates there because of the difficulty offered to its entry into the cæcum. The stomach itself is not infrequently dilated. This results partly from the process of digestion being prolonged and tedious from the abnormal accumulation of material in the digestive tract and partly from the existence of an excessive amount of gas due to decomposition.

The *diminution in respiratory capacity* which is brought about by indigestion in young people is a matter of vital importance and is a very material factor in lowering the activity of all the vital processes in the body. In the first instance deficient aeration and oxygenation result from serious alterations in the abdominal mechanics. Later a vicious circle is formed, the deficient aeration impairing the digestive processes. Very soon after birth in the state of civilisation familiar to us in this country the imperfect nature of the food supplied, which is not often maternal in origin, produces disturbances of the gastro-intestinal tract with the consequent imperfect nutrition. Now, in infancy indigestion is a very much more serious condition than it is in adult life; indeed, one may safely generalise by saying that the harm done by disturbance of the gastro-intestinal tract varies inversely with the age of the child. In young life the supply of nutritive material derived from the intestines has not only to meet ordinary wear and tear but an excess has to be obtained from which to form new tissues, and the growth of the child depends largely on the amount of this balance. As the process of digestion is vastly more active in infancy the facility with which it is interfered with is correspondingly great and the consequence of such upset is far-reaching and disastrous. The result of indigestion in the infant is to produce an inflammation and distension of the intestines and irritation and enlargement of the lymphatic glands draining the tract through which material passes, probably in an abnormal state, setting up troubles and disturbance in transit. Associated with these conditions, and in consequence of them, a varying quantity of serous fluid is thrown out by the irritated peritoneum. This general depreciation of vitality and the formation of a suitable culture medium render the abdomen of young infants a very common seat of tubercle.

The presence of toxic materials in the circulation diminishes the resisting power of the tissues to the entry of organisms and makes the sufferer throughout life a more ready victim to tubercle, rheumatoid arthritis, gout, gastric ulcer, and other diseases. The gums are unable to resist the entry of the organisms which thrive in the decomposing food accumulating in the intervals between the teeth and between the teeth and gums. This infection of the gums with the associated destruction of the teeth and inflammation of the lymphatic tissues in and about the mouth and pharynx serves to increase the gastro-intestinal disturbance by pouring foul material into the stomach and by fouling the air that enters the lungs. The odour of the air emitted from the mouths of these people is often very offensive. Their bodies have a peculiar and objectionable smell and this is most marked in the flexures. In advanced cases the flesh when incised has a "graveyard-like smell." This is most noticeable in cases of operations on the abdomen when a large area of peritoneum is exposed.

The mental depression associated with this form of poisoning is most remarkable, the patients being unable to set to work on anything, in some cases being so drowsy as to appear to be under the influence of a narcotic. They are also liable to attacks of faintness sometimes due to the presence of a large quantity of toxic materials in the circulation and sometimes to pressure on the heart by distended stomach or bowel. The loss of control over the temper is also a very marked feature. The harm done directly or indirectly by constipation is infinitely greater and more far reaching than that ascribed to alcohol while the misery inflicted on the individual as well as on those brought into constant association with him is often very great indeed. While in the large proportion of cases of sluggishly acting gastro-intestinal tracts constipation in varying degrees of severity is commonly present, in a certain number the patient obtains a daily evacuation, a surplus being discharged from the over-loaded cesspool. In a smaller proportion of cases diarrhœa may exist either alone, the patient having several evacuations in the day, one often following immediately on a meal, or there may be alternating periods of constipation and diarrhœa. The diarrhœa may be of a very irritating character and much mucus or even mucous casts may be present in the motions.

Perhaps the most marked features of this form of poisoning are the *progressive loss of fat* and the *increasing staining of the skin*. These two conditions combine especially to produce that appearance of premature age so characteristic of this condition of faulty drainage. The rapid loss of fat associated with a corresponding degeneration of the muscles and

other tissues is itself responsible for many other troubles. The viscera of the abdomen are very much affected by this and especially, perhaps, the kidneys. The result of all this is that the viscera lose their support and are in a condition described by a word of comparatively recent coinage—namely, "proptosis." Obstetric disabilities, for which complicated titles have been provided in abundance, are the direct result of the absorption of poisonous products, especially from the cesspool of the intestinal tract. The loss of fat appears sometimes very abruptly as if the tissues of the individual often had continued for a long time to offer a satisfactory resistance to the influence of the poisons and then suddenly gave up the struggle. In other cases the patient becomes gradually thinner. The staining of the skin is partly general and partly local. The whole of the skin may be thin, sticky, and inelastic, and abnormally dark and dirty-looking. This is at first only a transitory feature and disappears with free purgation. Popularly the person is described as being "off colour" or "bilious." I would point out, in passing, that the liver, probably from its bulk, has been blamed for all the trouble produced by the faulty mechanical condition of the intestines, and drugs, usually possessing antiseptic qualities and dignified by the name of "cholagogues," are given with the view of affecting that organ but really act by reducing the poisonous nature of the dammed-up contents of the intestine. I need only refer to mercury as an excellent example of this class. Later the skin becomes permanently dirtier than normal, the tinge varying, however, with the degree of toxicity of the sufferer. Besides this general pigmentation we find areas of exaggerated pigmentation corresponding usually to such surfaces as are exposed to friction or are normally dark. For instance, the skin of the labia and anus, the lower margins of the folds of the axillæ, the skin covering the spines of the lumbar vertebræ especially in women, the neck, the lower eyelid and the area below it, the inner portion of the eyelids, and the prominent parts of the cheek and temple show this pigmentation in a very marked manner. The conjunctivæ are also stained, first temporarily and then permanently, the colour varying in depth, as in the case of the skin. The pigment may be massed in sharply defined areas which may be very conspicuous. These are seen frequently on the cheek and temple, but may occur in any part of the body. The onset of this degeneration of tissues is an evidence that the body has become unable to resist the influence exerted by the poison upon it and unless it be met more or less effectually the changes progress at a rapidly increasing rate.

Another very common concomitant of the alteration in the form and mechanics of the cæcum is an obstruction of the appendix, its normal function being interfered with by its acquired abnormal fixation. I have already indicated in the earlier part of this paper the mechanical relationship of so-called "appendicitis" to overloading of the cesspool or cæcum. As its symptoms are more or less generally known I will not allude further to them. I say more or less generally known, as there is a remarkable tendency to ascribe to the appendix any tenderness present in or about a line which extends from the anterior superior spine of the ilium to the umbilicus and which has been dignified with the name of a distinguished surgeon. Those making this mistake have, however, the satisfaction of knowing that if the appendix is not the cause of the trouble it is freely mobile and its excision involves practically no risk. It can be removed through a very small hole, the comparative minuteness of which gratifies them and the patient, suggesting great operative skill. The operation frees the patient from a possible danger and the surgeon explains its obvious freedom from disease on the supposition that between attacks it may be quite normal. While the patient remains on his back during convalescence the absence of symptoms also suggests success, this opinion being only modified by the subsequent course of events. I am also of opinion that the presence of the distended and inflamed cæcum in the true pelvis interferes with the efficient performance of the functions of the ovaries and Fallopian tubes, in some cases producing matting of the tubes or ovaries or perhaps even determining a cystic degeneration in the latter. The presence of toxic material in large quantity in the blood causes a loss of fat and a want of tone in the muscle of the uterus, &c., interfering with the perfect functioning of the organ and its appendages. It also tends to make the ovaries and breasts undergo a cystic change at an early period. In this way the cæcal obstruction and the necessarily associated conditions are, I believe, largely responsible for the want of fertility in some women.

I have only referred indirectly to the attacks of acute obstruction of varying degrees of completeness and severity which may arise from interference with the passage of fæcal material from the cæcum into the ascending colon, from the ascending colon into the transverse colon, and from the transverse colon into the descending. A knowledge of the mechanics of the changes which ensue in the large intestine will readily enable the surgeon to diagnose these conditions and to differentiate them from trouble in the stomach, kidney, gall-bladder, appendix, uterus or rectum, to all of which structures I have frequently known these conditions attributed. In the treatment of such degrees of overloading of the large bowel as cannot be treated efficiently by measures short of operation I have obtained considerable success by dividing constricting bands and adhesions and by subsequent careful attention to the proper functioning of the bowel. In a considerable portion of cases such means are insufficient as at the best they only afford temporary relief since the condition of obstruction recurs sooner or later. Therefore, when I recognise that the mechanics of the intestines have been altered to a degree that cannot be rectified satisfactorily by the division of bands, &c., I divide the ileum at a distance of about five or six inches from the cæcum. This can be done rapidly and securely by applying two compression forceps on the ileum at an interval of about an inch so as to reduce the bulk of the coats to the minimum possible. As each pair of forceps is removed an encircling silk ligature is applied. The piece of bowel intervening between the ligatures is excised and the omentum connected with it is ligatured. A purse-string suture is introduced through the peritoneum and muscle coat transversely to the long axis of the gut at a suitable distance from each ligatured end. Each end is invaginated into the bowel and is retained there with perfect safety when the encircling purse-string ligature has been tightened and knotted. The sigmoid flexure and rectum are then examined with a view of determining which of the two affords the most readily accessible and safe conduit into which the ileum can be made to drain. In some cases the adhesion of the meso-sigmoid and sigmoid flexure is so considerable, and the fixation and wasting of this piece of gut are so great, as to make it advisable to effect a junction with the dilated rectum where the muscle wall is hypertrophied and easily dealt with. In most cases, however, by carefully separating the adhesions it is possible to bring out between the edges of the wound a piece of sigmoid flexure of sufficient length and mobility to effect a perfectly secure and safe junction with the ileum. Having determined on the piece of large bowel which is most suitable for the purpose the proximal extremity of the ileum is placed alongside the chosen portion and sufficient lengths of each are secured together by suitable forceps, gauze packing being placed about. Longitudinal incisions are made in the approximated pieces of bowel and by means of a continuous silk suture penetrating all the coats the aperture of communication, which should be of sufficient length, is rendered perfectly secure. To avoid any possible risk this junction is supplemented by an encircling continuous silk suture which does not enter the lumen but obtains a secure hold upon the peritoneum and muscle coats.

Should the blockage of the bowel be of sufficient severity and duration to have resulted in adhesions of the small intestine it is well to examine it along its length and divide such adhesions and bands as effectually as possible. In cases of volvulus of the cæcum the mode of treatment is precisely the same as that pursued in acute obstruction due to an impassable kink at the hepatic flexure or elsewhere. In this condition I ligature the ileum at a distance of about six inches from the cæcum. On either side of the ligature a purse-string suture is introduced. The bowel is divided just beyond the ligature and its proximal end is rendered secure by the invagination of the ligatured end and the tightening up and knotting of the proximal purse-string suture. A large rubber tube is passed through the distal segment of the ileum into the cæcum and through it the cæcum is first drained and then thoroughly cleansed with normal saline solution. The tube is removed and the distal portion of the ileum is closed in the usual manner. The communication between the ileum and sigmoid flexure or rectum is then established. In certain circumstances it is necessary to consider the advisability of

establishing lateral anastomosis between anchored loops of the small bowel liable to obstruction or to divide the ileum higher up than at the place where I usually disconnect it.

In volvulus of the sigmoid flexure the treatment varies with the conditions present. In cases of moderate severity a good result can be secured by imitating the process which takes place usually in chronic constipation—namely, the shortening of the meso-sigmoid and the fixation of the sigmoid flexure. This can be effected by a number of continuous silk sutures attaching the meso-sigmoid and then the sigmoid flexure to the peritoneum lining the wall. When the sigmoid flexure is enormously dilated and acutely inflamed two modes of treatment present themselves. On two occasions after draining and washing out the bowel I have excised the entire loop and obtained a perfect junction. I employed a Murphy's button for this purpose, as owing to the very considerable difference in the size of the two sections of the bowel and their fixations on to the floor of the iliac fossa it was practically impossible to connect them in the usual way by sutures. The condition of the patient in both cases rendered the avoidance of any delay of the greatest importance. As many of these cases occur in circumstances in which trustworthy assistance is not available a more simple procedure is to drain and to irrigate the loop and to establish a large, lateral anastomosis of the loop itself near its base, dividing and closing each limb of the loop beyond the junction, or I have cut through the limb of the loop just beyond the margin of the abdominal wound and have established an end-to-end anastomosis. The treatment must to some extent vary with the conditions present.

The operation for chronic constipation of dividing the ileum and establishing continuity with the lower portion of the large bowel appears to be accompanied with no risk in ordinary circumstances. If, however, the obstruction be acute and the intestines and abdomen be distended the risks are rather those of the condition calling for interference than of the operation itself. Except in advanced cases, in which the small intestines have become adherent to one another and consequently liable to obstruction, this operation affords the patient a partial or complete freedom from all the symptoms which existed previously, its relief varying inversely with the physical changes in the small bowel. The only objection to this modification in the nature of the drainage of the tract is that if the patient is careless and does not attend to the daily evacuation of the rectum material may occasionally pass backwards into the cæcum and hard masses of fæcal matter may rest there and perhaps cause irritation. As a rule these may be readily removed by an enema, but if the condition recurs and is troublesome I remove the cæcum and ascending colon up to the flexure. As by this time the patient has gained flesh and strength this operation, which is a simple one, is readily borne without risk or anxiety. The ideal primary operation would be the removal of the large bowel down to the junction with the ileum, but against such a measure there is the very unsatisfactory state of these patients which renders them quite unfit to undergo such a severe operation as the removal of nearly the whole of the large bowel without very grave risk to life. As a matter of fact the cases which require subsequent excision of the cæcum and ascending colon are very rare. Exceptionally when the chief obstruction is at the splenic flexure the transverse colon might also be removed advantageously. When the system of intestinal drainage has been rendered efficient and the patient has been freed from the toxic materials interfering seriously and progressively with health there is no abnormal risk in such an operation as the removal of the cæcum and ascending colon and even also of the transverse colon.

I would call your attention most strongly to the extreme importance of operating at a sufficiently early date. What I mean is that if you delay interference till the small intestines have been habitually distended with fæcal contents and their walls have become thinned and their muscle wasted and inefficient, till the stomach has also become affected, and till the gastro-intestinal tract has got into the habit of performing its functions in a dilatory and inefficient manner, you will obtain only a partial amount of benefit from the operation. It would seem that, unlike voluntary muscle, once the involuntary muscle fibre of the intestine has become overstrained by the pressure exerted upon it over a long period of time by the intestinal contents recovery is very slow and very imperfect.

BENIGN VILLOUS TUMOUR OF THE RENAL PELVIS; HÆMOTHORAX; NEPHRECTOMY; RECOVERY.

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A MAN, aged 38 years, had always enjoyed excellent health and had led an outdoor life, partly in New Zealand and partly in East Anglia, in both of which districts calculous diseases are very common. For the four years previously to coming under observation (1899–1903) he had been subject to attacks of what he called "colic," for which he had to seek medical advice on several occasions. In 1901 he first noticed blood in his urine and this continued at intervals for two years. This bleeding occasionally occurred without pain, sometimes it was accompanied by pain in the urethra and lower abdomen, sometimes by retention of urine, and generally by backache. He could express no definite opinion as to which side was most painful. The bleeding and pain appeared to be aggravated by exertion, but there were numerous occasions on which the patient retired to bed feeling well and having passed quite clear urine awakened with an aching back and a large quantity of blood in his urine. This was a point which might have suggested tumour as the cause of the hæmorrhage. During 1903 these attacks of pain and hæmorrhage had become very frequent, occurring sometimes with as long an interval as ten days, often with much less interval and lasting several days at a time.

On Sept. 22nd, 1903, he was seized with severe left renal colic and he passed what "sounded like," and appeared to be, a stone, but unfortunately he did not keep it. He then came under the observation of one of us. There was a large quantity of blood in the urine and distinct tenderness and rigidity in the left loin and down the left ureter, but the right loin seemed quite free from pain and tenderness and there were no other signs of disease except some anæmia. It was then agreed that as soon as he could make arrangements he should go into a nursing home and have his left kidney explored for stone. He continued to pass large quantities of bloody urine, but on Oct. 2nd he went out shooting in a very much inclosed country, necessitating a large amount of jumping over hedges and ditches. At night he felt faint and had severe pain in the right loin, this being the first occasion on which the pain had been definitely felt on that side. In spite of this he was out walking for several hours next day but returned home in agony. He became blanched and breathless, vomited continuously, and remained collapsed and almost pulseless. The urine contained clots and had the appearance of almost pure blood. His condition became so serious and his blood-vessels so empty that saline injections were required to keep his circulation going.

There was great pain and tenderness over the right loin with some swelling which gave the impression of a blocked kidney, but owing to the great thickness of the abdominal parietes neither kidney could be definitely felt. Under the influence of rest and ergot the hæmorrhage subsided but the temperature tended to rise, giving the idea of a ruptured kidney, and as he was living a long way from surgical aid it became necessary to move him. This was done on Oct. 9th and in carrying him downstairs he received a blow on his right loin which was followed by some faintness, but whether this blow was the cause of the subsequent complications is doubtful. He bore a journey of 100 miles fairly well and after resting in bed some days his urine gradually became clear; no villous fragments could be discovered in the urine, but there was a large number of epithelial cells of various sizes and shapes, similar to those found in all cases of irritation of the renal pelvis. There were some oxalate of lime crystals.

On Oct. 18th he was still extremely anæmic and it was noticed that he had developed some dyspnœa which led to the discovery of a right pleural effusion. On the 20th 30

VILLOUS TUMOURS OF RENAL PELVIS.

No.	Physician or Surgeon.	Sex.	Age.	Reference.	Nature of growth.	Remarks.
1	De Morgan.	F.	76	Transactions of the Pathological Society, vol. xxi., p. 239.	Benign papilloma.	Disease had existed for years.
2	Murchison.	M.	65	Transactions of the Pathological Society, vol. xxi., p. 241: figured in Bland-Sutton's Tumours, p. 225, fig. 133.	,, ,,	Hæmaturia 14 months. Growths in both pelves and at both ureteric orifices in bladder. Patient died from uræmia.
3	Pearce Gould.	F.	66	Middlesex Hospital Reports, 1897, p. 131. Specimen Middlesex Hospital Museum.	,, ,,	Nephrectomy.
4	Kellock.	M.	27	Middlesex Hospital Reports, 1897, p. 131.	,, ,,	,,
5	Henry Morris.	M.	—	H. Morris's Surgical Diseases of Kidney and Ureter, vol. ii., p. 9.	Carcinoma with villous tufts.	Seven months' continuous hæmorrhage; nephrectomy death.
6	Drew.	M.	56	Transactions of the Pathological Society, vol. xlviii., p. 130.	Villous carcinoma.	Hydronephrosis; nephrotomy; removal of tumour; subsequent nephrectomy.
7	Billroth.	M.	33	Wiener Medicinische Wochenschrift, 1884, No. 25, 774.	Benign papilloma.	Nephrectomy; recovery.
8	T. Jones (Manchester).	M.	55	Practitioner, 1892, vol. ii., p. 131.	Carcinoma.	Hæmaturia 18 months; nephrotomy; growth removed with finger and spoon; recovery; subsequent nephrectomy.
9	Battle.	M.	51	Transactions of the Pathological Society, vol. xlix., p. 178; also Brit. Med. Jour., 1895, p. 1206.	Simple papilloma with calculus.	Nephrolithotomy; scraping; nephrectomy.
10	Knowsley Thornton.	F.	32	Annals of Surgery, 1885, vol. ii., p. 424. Medical Times and Gazette, 1885, p. 348. Specimen in the Museum of the Royal College of Surgeons of England.	Simple benign papilloma with calculus.	Hydronephrosis; nephrectomy.
11	Bright.	—	—	Specimen in Guy's Hospital Museum, No. 1662.	Carcinoma.	Fistulous opening between colon and interior of kidney.
12	—	—	—	Specimen in University College Museum, No. 1888.	Papillary growths.	Smooth calculus distended the calyces, forming a series of sacs, in four of which were small papillary growths.
13	Barker.	M.	56	Specimen in University College Museum, No. 1922.	Villous carcinoma with simple papilloma.	Villous carcinoma in dilated calyces. Simple papillomatous tumours in bladder and ureter.
14	Bradford.	M.	44	Transactions of the Pathological Society, 1898, vol. xlix., p. 171. Specimen in University College Museum, No. 1914.	Benign papilloma.	Patient died from delirium tremens. Post-mortem examination revealed kidney distended with blood clot, in centre of which was a calculus. The upper end of ureter and renal pelvis were lined with papillary growth.
15	Reginald Harrison.	—	—	Reginald Harrison's Surgical Disorders of Urinary Organs, p. 204, fourth edition.	Papilloma.	Villous tumour of bladder. After death pelvis of one kidney was found full of villous growth.
16	J. Pantaloni.	—	—	Archives Provinciales de Chirurgie, Paris, 1899, vol. viii., pp. 1–44.	Le papillome du bassinet.	Nephrectomy; recurrence.
17	P. Tikhoff.	—	—	Archives Provinciales de Chirurgie, Paris, 1901, vol. x., pp. 145–48. A specimen in King's College Museum.	Un cas de papillome du bassinet. Villous papilloma with melanotic sarcoma.	—
18	Hurry Fenwick.	M.	72	Hurry Fenwick's Ureteric Meatoscopy in Obscure Diseases of Kidney, figs. 20 and 21, p. 81. Also Transactions of the Medical Society of London, vol. xx., p. 228. Specimen A. 3584, in the Museum of the Royal College of Surgeons of England.	Villous carcinoma.	After two years' hæmaturia exploration of kidney with negative results. Two years subsequently nephrectomy by Mr. Fenwick. One year later removal of ureter for recurrence. Death five years after nephrectomy.
19	,,	M.	30	Ureteric Meatoscopy, p. 85, fig. 23.	Villous papilloma.	Nephrectomy after one year of hæmaturia; cured. Well five years later.
20	,,	M.	40	Ureteric Meatoscopy, p. 86, fig. 24.	Villous carcinoma.	Nephrectomy; recurrence. Death six months later.
21	,,	M.	59	Ureteric Meatoscopy, p. 89.	Papilliferous carcinoma.	Nephrectomy. Death six years later from cancer of liver.
22	Hoche and Damange.	M.	—	Les Lésions du Rein, L. Hoche.	Benign papilloma.	Patient passed fragments of villous growth by urethra and as symptoms subsided no surgical interference was needed.
23	E. Owen.	M.	1½	St. Mary's Hospital Museum, 1196 A.	Reported as mixed carcinoma and sarcoma.	Nephrectomy. Large tumour of kidney with spaces in which were papillary growths.

VILLOUS TUMOURS OF RENAL PELVIS—*(Continued)*.

No.	Physician or Surgeon.	Sex.	Age.	Reference.	Nature of growth.	Remarks.
24	Heaton and Gamgee.	M.	48	THE LANCET, Sept. 13th, 1902, p. 746.	Benign papilloma.	Kidney twice the size of normal. The pelvis was dilated and completely filled with villous growth; the kidney substance had quite disappeared. History of nine and a half years' intermittent hæmaturia. In 1883 the left kidney was explored with negative results. In 1884 suprapubic cystotomy was performed to remove clots; no light on source of hæmorrhage. In 1885 the right kidney was explored; nothing found. In 1888 the left kidney was explored; nothing found. In 1889 examined with cystoscope; negative result. In 1902 left nephrectomy was performed; cure.
25	Savory and Nash.	M.	38	Specimen in the Museum of the Royal College of Surgeons of England.	Villous papilloma.	Rupture into pleura; nephrectomy; recovery.
26	B. Poll.	M.	41	Brun's Beiträge, 1899, p. 822.	Villous epithelioma.	Nephrectomy.
27	Toupet and Guenlot.	F.	39	Bulletin de la Société Anatomique de Paris, 1898, p. 678.	,,	—
28	Jena.	M.	—	Centralblatt für allgemeine Pathologie und Pathologische Anatomie, 1894, p. 669.	,,	—
29	Voelcker.	M.	68	Transactions of the Pathological Society, vol. xlvi., p. 133.	Villous carcinoma.	Post mortem.
30	Albarran.	M.	64	Thèse d'Heresco, Paris, 1899, p. 84.	Villous epithelioma.	Nephrectomy.
31	Reynès.	M.		Proceedings of the International Congress, 1900: Section of Urinary Surgery, p. 77.	Papilloma: recurred as carcinoma.	,,
32	Grohé.	F.	37	Deutsche Zeitschrift für Chirurgie, 1901, vol. lx., p. 1.	Adeno-carcinoma.	Transperitoneal nephrectomy; death eight months afterwards.
33	,,	F.	60	,, ,,	,,	Nephrectomy.
34	Albarran.	M.	45	Tumeur du Rein, Albarran, No. 34, p. 699.	Cylindrical epithelioma.	Nephrectomy; recurred in six months.
35	Israel.	M.	52	Chirurgie Klinische der Nierenkrankheiten, 1901, p. 533.	Villous epithelioma.	Nephrectomy; recurrence one year after.
36	,,	M.	64	,, ,,	,,	—
37	Reynolds, Harry B.	M.	66	Annals of Surgery, May, 1904.	Papilloma.	Papilloma; size of tomato; hydronephrosis containing 14 pints; nephrectomy; death.
38	Rayer.	—	—	Atlas, plate xi., fig. 4.	,,	—
39	Lebert.	—	—	Anatomie Pathologique, 1861, vol. i., p. 269.	,,	—
40	Lancereaux.	M.	64	Dict., Dechambre, vol. iii., p. 247.	,,	
41	Neelsen.	M.	57	Ziegler's Beiträge, 1888, p. 279.	,,	
42	Kohlhardt.	F.	69	Virchow's Archiv, 1897, p. 565.	,,	
43	Kauffmann.	M.	Young.	Lehrbuch der Speciellen Pathologischen Anatomie, 1896, p. 627.	,,	—
44	Jebens.	M.	42	Thèse de Strasbourg, 1894, Obs. vii.	,,	
45	Le Dentu and Albarran.	M.	33	Bulletin de l'Académie de Médecine, 1899, p. 240.	,,	Nephrectomy and ureterectomy.
46	Ricard.	F.	45	Quoted by Albarran.	,,	
47	Heresco.	M.	32	Annales Génito-Urinaires, June, 1901.	Papillomatous adenoma.	—
48	Albarran.	F.	35	Société de Chirurgie, July, 1902.	,,	
49	Rayer.	M.	28	Traité, vol. iii., p. 699, 1841.	Papillomatous epithelioma.	

ounces of very deeply blood-stained fluid were aspirated from his right pleura and on the 25th two ounces of almost pure blood. This fluid did not smell of urine and unfortunately it was not tested for urea. A blood examination gave negative results. Gradually the effusion cleared up and on Nov. 8th an exploratory operation was performed on the right kidney by the lumbar method. The kidney was very much enlarged, extending upwards to the diaphragm and downwards to the iliac fossa. It measured from nine to ten inches from above downwards. Near its upper end a soft spot was found and when this was accidentally opened masses of blood clot, both old and recent, extruded. Several handfuls of this were removed and some villous-like growth was found in it which suggested malignant disease. It was evidently necessary to remove the kidney and this was done. There was great difficulty in separating it from the diaphragm, to which it was firmly adherent, and it was obvious that there had been a perforation through the diaphragm into the pleura, which, however, did not appear patent at the operation. The operation was a very difficult one owing to the very great muscular development of the patient and the size of the kidney and its adhesions. A huge cavity was left after its removal, but this closed rapidly and the patient quickly recovered. There was no stone found at the operation.

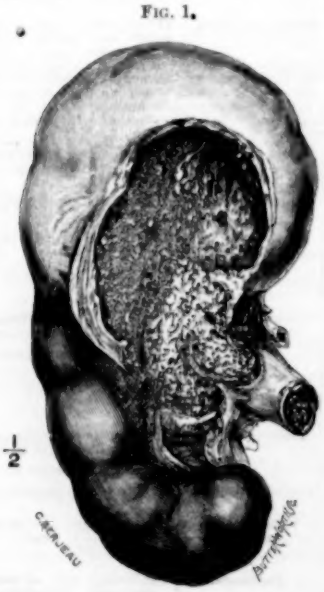
The urine passed on the first seven days after the operation amounted to 19, 27, 42, 32, 57, 53, and 43 ounces and it soon became quite clear and normal in character. A week after the operation he had an attack of left renal colic and passed a small calculus which the nurse unfortunately lost. Since then the patient has remained quite well; he has gained a good deal of weight and is able to ride and to shoot and feels better than he has done for years. Over 12 months have now elapsed since the operation.

The kidney (Fig. 1) is preserved in the Museum of the Royal College of Surgeons of England but it hardly shows the size it was *in situ*; much of the villous growth and blood clot which filled the upper dilated calyces was lost at the operation, the ureter is partly occupied by growth and has probably been blocked from time to time by blood clot. The kidney substance has entirely disappeared from the upper portion but some apparently healthy kidney remains below.

The microscopical section (*vide infra*) shows a simple villous papilloma (Fig. 2).

As to the diagnosis, papilloma of the renal pelvis is so extremely rare that it is not surprising there was considerable difficulty in correctly diagnosing this case. The first

FIG. 1.



of us who saw the case suggested stone in the left kidney, then stone in the right kidney, then he thought a stone had ruptured the kidney, and when hæmothorax developed he still clung to the diagnosis of a calculus which had ruptured the kidney and penetrated the diaphragm. His colleague considered that it was a calculus but thought the hæmothorax was due to traumatism not necessarily affecting the kidney. Finally, the operation discovered a tumour which we thought might be malignant but which the microscope showed to be benign papilloma. Anyone who reads this case will agree that there was a considerable amount of evidence in favour of every one of the above diagnoses.

The actual history of passing calculi obscured the real cause of the hæmaturia but the point we have emphasised—viz., passage of blood during rest in bed—was hardly like hæmaturia from calculus and should have suggested the correct solution. When the hæmothorax developed we questioned whether tubercle or malignant growth was the cause of this, but the appearance of the patient was against either, though his family history suggested both. His mother had died from carcinoma of the kidney, two brothers from pulmonary tuberculosis, and a sister from tuberculous meningitis, and with very few exceptions all his relatives who did not die from tubercle died from cancer.

S. Paget, in his "Surgery of the Chest," p. 198, says: "A hæmorrhagic effusion into the pleura is almost certainly a sign either of tubercular or malignant disease of the lung or pleura at whatever age it occurs"; and p. 199: "A hæmorrhagic effusion may occur in cases of abdominal tumour and is almost certain proof that the abdominal disease is malignant and has invaded the diaphragm."

Osler,[1] in addition to tuberculous and cancerous pleurisy, states: "Occasionally hæmorrhagic exudation into the pleura is met with in perfectly healthy individuals." He also mentions Bright's disease, malignant fevers, and cirrhosis of the liver as causes. Hæmothorax and hæmaturia have been reported in combination by Oliver,[2] but we are unable to find any case of hæmonephrosis which perforated into the pleura; in Bright's case there was a fistulous opening into the colon.

[1] Osler: Principles and Practice of Medicine, p. 674.
[2] Brit. Med. Jour., March, 1892, p. 647.

We have visited or made inquiries at the museums of all the medical schools in London and from these sources and the literature on the subject we have collected some 49 cases of villous tumours of the renal pelvis. The works of Henry Morris, H. Fenwick, Albarran, and Imbert have supplied the majority of them, but they have not been collected together in English literature so far as we can ascertain. The subjoined list speaks for itself; particularly it emphasises the rarity of these tumours in the female. It will also be seen that the diagnosis of these cases presented difficulties even to the leading surgeons and physicians of the day. Mr. Fenwick's patient had been under many well-known surgeons and physicians who diagnosed oxalate of lime stones in one or other kidney, growth of kidney, villous growth of the bladder, and

FIG. 2.

so on. One surgeon cut down on his right kidney but declined to open it. The patient then for two years went the round of the profession in London and Edinburgh till Mr. Fenwick removed his kidney and cured his hæmaturia. In the case described by Heaton and Gamgee the patient was in various hospitals in Birmingham and under the most careful observation, but it took nine and a half years and five major operations, to say nothing of cystoscopy, before the diagnosis and cure were completed. Our patient certainly presented unique complications and baffled exact diagnosis but his treatment has been correct and now that more than 12 months have elapsed since his operation we can say that he has recovered and that there is a fair hope that he is cured.

Bedford.

ETHYL CHLORIDE AS AN ANÆSTHETIC IN GENERAL PRACTICE.[1]

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HAVING often been asked by general practitioners my opinion of the suitability of ethyl chloride as a general anæsthetic I think a few remarks on this subject may not be devoid of interest. There may be but little new to say and you may feel that what I do tell you is in the nature of a "back number." You are all doubtless as familiar with what has been written upon this subject as I am and I shall therefore have to rely on my own practical

[1] A paper read at a meeting of the Winchester Division of the British Medical Association on Nov. 25th, 1904.

experience of ethyl chloride. This experience is considerable, for since the summer of 1903 I have used it constantly at the London Hospital in a large number of cases at the Royal Dental Hospital, and also in private practice. I have given it to every variety of case and in every variety of way, to old men and maidens, young men and children, infants, and aged women. I have given it alone and with air, with nitrous oxide, with chloroform, with ether, and with A.C.E. mixture, and as a preliminary to each of the last three for a large variety of surgical operations.

As my remarks will be of an essentially practical nature I will not enlarge upon the history of the drug; ethyl chloride is not new, indeed it is quite old, at any rate old enough to have been practically forgotten until Dr. W. J. McCardie of Birmingham nearly four years ago reminded us of its anæsthetic properties and showed us how, with the purest ethyl chloride procurable, it might in skilled hands be a most valuable addition to our armamentarium; since then Dr. McCardie has done most valuable work on the subject, work which has already become classical and work for which all anæsthetists and, I think I may say, the public too, owe him a debt of gratitude. The history, then, of ethyl chloride we may almost ignore, for as busy practitioners we have little time to devote to the study of ancient history, but the history in this case has one important practical point for us—viz., it impresses upon us the fact that even in skilled hands death under ethyl chloride has occurred suddenly and unexpectedly. I make this point because with much familiarity one becomes so charmed with the action of ethyl chloride as an anæsthetic that one may easily underestimate its lethal power.

Ethyl chloride (C_2H_5Cl) is a colourless, very mobile liquid, is very volatile, boiling at 12·5° C. or 55° F. It has a pleasant smell and on inhaling a breath or two a pleasant feeling of exhilaration is experienced.

What are the capabilities of ethyl chloride in general practice? Before deciding this point we must learn what the requirements of the general practitioner are for an anæsthetic, and I hope further light will be thrown on the point in the discussion. I suppose I may take it that to satisfy him the agent must be portable, of stable composition, safe, easy of administration, not requiring elaborate preparation beforehand, rapidly acting, and providing if necessary a narcosis of several minutes after removal of the inhaler—a narcosis which shall be quiet and sleeplike and which shall not necessitate close watching after a safe dose has been administered; an agent giving an anæsthesia which shall not be followed by dangerous or unpleasant after-effects. Ethyl chloride fulfils most of these conditions, provided it is administered with care and discrimination and provided that the administrator is a keen observer and quick to notice the finest shades of difference in a patient's condition. Ethyl chloride is certainly portable. I have here a bottle containing enough to anæsthetise 12 ordinary cases which is but seven inches high and one and a half inches in diameter. Its composition, if properly stoppered and kept cool and in the dark, is practically stable; I am now using some ethyl chloride I bought several months ago. It is relatively safe; that is, there have been few recorded deaths in many thousand administrations, but its action is so extraordinarily rapid, startlingly rapid in some cases, that unless it were administered with the greatest caution in those cases it would be most easy to give an overdose.

It may be well to quote here a case which occurred to me a few months ago, and which was most instructive to me—a case which has inspired me with the greatest awe for the power of ethyl chloride. The patient was a youth, aged 18 years. The operation was for the radical cure of hernia. He seemed rather frail but otherwise he was normal in every respect. I decided to demonstrate to my clinical clerks the induction of ether anæsthesia preceded by ethyl chloride. The usual precautions were taken and after mentioning the great rapidity with which the drug acts I sprayed five cubic centimetres into the inhaler and began the administration. The boy took only a few breaths when he began to struggle, but owing to the short lapse of time since I had applied the face-piece these struggles were considered voluntary, that in fact the patient was objecting to the taste and smell of the anæsthetic, and as the eyelids were tightly closed I held on; but a moment later the struggles became more clonic and opisthotonos developed—to one of experience there was no mistaking this sign. The inhaler was at once removed and the pupils were examined. I never saw pupils more dilated, the corneal reflex was absent and the iris did not respond to the stimulus of light. Had I not been a witness of this case I would not have believed that any drug could possibly act so rapidly—the whole thing occurred inside 20 seconds I am sure, and the experience has been one of my most valuable. Before leaving this case I may say a word about the early condition of the lids; they were tightly closed, and as every anæsthetist knows the tonicity of the eyelids is a valuable index of the condition of the other ocular reflexes—that is to say, if there be a good "tone" in the lid muscle one may take it that the other reflexes are present, but if the lids be flaccid it is probable that the other less delicate reflexes are abolished also. Taking into account this contraction of the lids (they did not "give" to the finger) with the short time since the inhaler was applied the true condition, viz., that the orbicularis palpebrarum was involved in the general muscular convulsion, was mistaken for unabolished lid reflex. One, of course, never judges from one piece of evidence only, and in this case I reviewed the evidence of (1) the time during which the administration had lasted and the dose given; (2) the condition of the eyelids; (3) the respiration (it was not, as is usual, characteristic of the condition of the patient); and (4) the evidence of my past experience. The result shows that even with so much evidence a judgment may be unjust and impresses on us the point that we must, in administering anæsthetics, never rely on one piece of evidence only, but take for our guide the patient's whole condition in its several factors and not the condition of only one reflex or other sign. This case was so unusual that had I been a novice in the administration of anæsthetics I fear I should have lost him. But this is digression.

One full dose of ethyl chloride provides an available anæsthesia of at least two minutes, an anæsthesia which if complete muscular flaccidity is not required is, I think, ideal, and after which unpleasant occurrences are not common if proper precautions are taken. But if, on the other hand, complete muscular flaccidity is required the anæsthetic must be pushed to the limit of safety, and although one gets a longer anæsthesia bad after-effects are more likely to follow. I have said so much in favour of ethyl chloride that a wrong impression will be created unless I now point out its limitations; they are, that it is unsuitable for long operations because not only does it produce anæsthesia rapidly but it is also very rapidly eliminated, consequently it is very difficult to maintain a proper even depth of anæsthesia and unless this is attained an undue strain is thrown upon the automatic vital centres. If it were used for long operations the cost would be considerable, and it would require the undivided attention of a skilled and expert administrator so that, at any rate, one man could not administer the anæsthetic and operate at the same time, which is often necessary in general practice in the country. Not only this, but the after-effects vary in direct proportion to the length of the administration, and after large doses faintness or more serious cardiac depression are likely to be met with.

We now come to the administration itself and I will tell you what I find is the best practice.

1. *The inhaler.*—So many new inhalers have recently been placed upon the market, each claiming to be the best, that it is difficult for the uninitiated to decide on which to purchase. After using a variety of inhalers I recommend above all others Carter Braine's modification of Ormsby's inhaler, which I will now show you. My reasons are that if you give ether at all it is probably this inhaler you already have—if not I think it ought to be. One does not want to multiply one's apparatus any more than can be avoided and with the inhaler referred to any anæsthetic could be given. The intrinsic advantages of the inhaler are that its air way is so wide that there is absolutely no obstruction to respiration if you insert your sponge properly—and a great deal is involved in this. The following points are worth remembering: (1) character of sponge: it should be of the honeycomb variety; (2) it should be unbleached, because when wet it does not lose its rigidity or elasticity—it is true that the bleached sponges look prettier but directly they are wetted with anæsthetic fluids they collapse and there is great difficulty in breathing through them; (3) it should be cut so that the channels run parallel with the long axis of the inhaler and the patient then respires through a series of tubes bathed in the anæsthetic fluid; (4) it should not fit the inhaler tightly

so as to compress its channels; (5) it should be well wrung out in warm water before use so that all its cells fully expand; and (6) it should be so placed in the inhaler that all the foregoing points have full play. Some have objected that if one uses the Ormsby one "crowds on" the anæsthetic too much, but please note that I have not suggested that one should put the full dose *on the sponge* and clap the inhaler on the face suddenly; this would, of course, be bad practice and those who raise such an objection are lacking in imagination and show a want of resource in the use of apparatus. The proper way to use ethyl chloride in an Ormsby is to apply the anæsthetic not *on* the sponge but *beyond* it; in this way the vapour is screened from the face by the sponge and does not come over too suddenly, it does not freeze solid as is usually the case if merely sprayed on the surface of the sponge where it evaporates very quickly. Then do not *clap* on the inhaler but apply it gently to the bridge of the patient's nose at an angle away from the face and with the air valve open, then gradually shorten this angle and when the inhaler properly fits gradually close the air valve. The face-piece meanwhile should be supported and closely applied by the aid of the little finger of the hand holding it being placed under the chin. Experience will soon teach you how rapidly these manipulations may be carried out; suffice it to say that one can so anæsthetise a child that it will neither hold its breath, cough, nor struggle from beginning to end of the administration and yet one will not have lost by evaporation so much of the anæsthetic as to require a second dose. Of course, if the drug is too suddenly applied any patient may cough or struggle, the struggles being usually struggles for air and not mere struggles from excitement as many students seem to think, for the breath is taken away by the pungency of too strong a vapour.

2. *Preparation of the patient.*—This naturally need not be as elaborate for an operation in minor surgery as for one in major surgery, but do not be misled by statements to the effect that *no* preparation is required; merchants of ethyl chloride or its mixtures, particularly the latter, attempt to make capital in this way; if the stomach, bladder, or bowels be full at the time of the administration they are very likely to empty themselves reflexly either during or immediately after the administration.

3. *Posture.*—Almost any posture is safe, so far as the anæsthetic is concerned, but remember that small children are best anæsthetised in the recumbent position—they are apt to collapse into a heap in the chair if the administration is conducted therein. Also remember that children prefer to sit while being anæsthetised—they are less frightened than if laid down; one can always let them sit for the first few breaths and as soon as the higher consciousness is lost lay them down. Remember, moreover, that the pain of fear is worse than any physical pain and that the less a patient is, from youth, amenable to reason the more is he susceptible to fear, therefore deal tenderly with the little ones. But if you do place a patient in a chair place him so that there is no obstruction to respiration and no fear of the respiration becoming obstructed during the administration; that is, he should be made to sit erect with the head erect on the spine, so that the floor of the mouth is horizontal, for if the head be thrown back, in the favourite position with dentists and barbers, the neck muscles are put on the stretch and the trachea becomes pressed upon in consequence and there is a risk of the respiration becoming obstructed. Not only this but any saliva, blood, or other fluids gravitate backwards and are either swallowed or inhaled, in the former case giving rise to subsequent vomiting and in the latter to laryngeal spasm. If, on the other hand, the head be tilted forwards the chin is apt to press unduly upon the trachea and cause respiratory embarrassment in this way; in either case serious cyanosis, &c., will result and with the head thrown back "false stertor" is heard early in the anæsthesia, before the patient is fully anæsthetised, which may lead you to misjudge the depth of anæsthesia and stop the administration too soon.

4. *Dose.*—This depends upon what operative procedure you wish to do and upon the weight and fitness of your patient. Always dose according to weight—I mean that a big, heavy person will require more, other things being equal, than a small thin one; allow more for alcoholics and smokers and those who are intemperate in anything and allow less for the anæmic or breathless person. A good average dose for an average adult is 5 cubic centimetres; but, of course, the dose will vary with the degree of dilution and if the face-piece does not fit accurately there will be considerable admixture of air and he may require a further dose, or you may be unable to obtain a satisfactory anæsthesia at all. It is better to give a full dose and rapidly induce, allowing no admixture of air beyond that which is already in the inhaler, than to economise your drug and make up for smallness of dose by prolonged re-breathing.

5. *After-effects.*—These vary in direct ratio to the amount of re-breathing to and fro allowed; also on the amount of previous preparation and to some extent the dose—after large doses or prolonged administration during which much re-breathing has been allowed shock and faintness are likely to be met with. Another important point is the after-treatment; for instance, if a patient be moved too soon he is more likely to suffer from vomiting and headache, but if he be allowed to remain in the recumbent posture for a quarter of an hour or more after the administration he is less likely to have after-effects. My average at hospital among all classes of patients is that about 3 in 12 have after-effects; many of these, however, come to hospital soon after a meal and otherwise unprepared. In private practice vomiting is quite uncommon.

6. *Clinical signs.*—Provided that the administration is conducted in the way I have described—that is to say, that no outside air is admitted to the inhaler after the air valve has been closed—the following signs are observed: 1. Breathing deepens and becomes more rapid—this alteration in the character of the breathing affords a most valuable guide as to the degree of anæsthesia attained and results, I think, not so much from the action of the ethyl chloride *per se* as to the restriction of oxygen, the oxygen originally in the inhaler being soon used up, with consequent stimulation of the respiratory centre. 2. A little later one feels by the finger under the patient's chin some vibratory movements of the larynx and a moment later still these vibrations become more and more audible, until (3) the characteristic laryngeal stertor is observed. At this point the administration should be stopped—i.e., if the stertor be *true* tracheal stertor and not due to faulty posture causing obstructive or "*false*" stertor. 4. About the same time that the breathing deepens the patient's colour improves and the face becomes suffused and he looks a pretty, healthy, pink colour. There is some controversy as to whether the blood pressure is raised or depressed during the induction of anæsthesia. I incline to a middle opinion—viz., that at first, owing to the increased force and frequency of the pulse which is observed in nearly all cases, the pressure tends to rise but almost at the same time there is some vaso-motor paralysis in the cutaneous vessels; these accordingly dilate to a considerable extent and thus the pressure is equalised or even tends later in the course of the administration to fall. But this dilatation which causes the suffusion of the face also causes perspiration in many cases and in others, again, considerable bleeding from the wound, especially after the removal of adenoids and tonsils, particularly if the anæsthesia has been pushed and the vaso-motor paralysis thus increased. I do not think it matters much in actual practice whether the pressure rises or falls, for in the event of any accident happening one has no time to waste over examining the pulse. It has been established that ethyl chloride kills, not by paralysing the heart, but by paralysing the respiration, the chest becoming fixed in over-expansion; thus, in restoring a patient who has been over-dosed nitrite of amyl, for instance, would be useless. 5. About the same time, or a little earlier than that at which the first tracheal stertor has been noticed and a little later than that at which the face becomes suffused—usually from 40 to 50 seconds—the globes of the eyes become fixed, often after some preliminary nystagmus and usually in the position of convergent squint downwards. 6. A moment or two later the pupils dilate and if the anæsthetic be not now removed (7) the light and the corneal reflexes disappear, the pupils becoming very dilated and fixed. If air be now admitted and the anæsthesia be lightened or continued in a lighter stage the pupils again contract, but I have seen in several cases, even after the corneal reflex has returned, the pupil remain wide and insensitive; I do not know how to account for this, any more than I can explain why in yet a few other cases the pupil does not dilate, even although the patient be deeply anæsthetised. These irregular cases only again impress upon us the necessity for considering all the points of available evidence before making up our minds as to a patient's condition. To repeat, although in about 90 per cent. of cases the signs of deep anæsthesia are stertor, fixity

of the globes, and dilated pupils with loss of ocular reflexes, yet these signs must not be taken as invariable and one must always be on the watch for unusual symptoms. As a rule there is but little salivation during induction, but often one meets with profuse secretion of saliva for no obvious reason—this is a point worth remembering in arranging the patient's position. It is never wise to push the anæsthetic in the case of fat subjects; they bear deprivation of oxygen badly and are more likely to suffer from shock; also their respiratory passages are as encroached upon by fat overgrowth on the inside as are the skin and cutaneous tissues, and the air ways are more likely to become occluded. Never administer ethyl chloride without first placing a wooden dental prop between the teeth—this not only keeps the air way free but is also a safeguard in case one may have to insert a Mason's gag to expedite means of resuscitation.

Some anæsthetists have stated that ethyl chloride is unsuitable for certain special operations—e.g., for breaking down joints and for setting fractures, &c.—because they say they cannot obtain complete muscular flaccidity, but I think that is merely a question of degree of anæsthesia and that if the anæsthetic be administered with a free admixture of air and is pushed to fixity of the globes, dilatation and fixity of the pupils, with loss of corneal reflex and with stertorous breathing, there will be complete muscular flaccidity in the vast majority of cases.

With regard to contra-indications, in the following conditions ethyl chloride should not be administered: diseases of the larynx; inflammatory lesions and tumours in, or adjacent to, the respiratory passages; goitre; all conditions giving rise to urgent dyspnœa; and in long operations. Time will not permit of my mentioning other points—e.g., treatment of dangerous symptoms, &c.; its use with other anæsthetics and for long and for special operations, especially tonsils and adenoids, except to remind you that in these last the risk is increased if the coughing reflex be abolished and that under ethyl chloride this occurs very rapidly.

Wilton-place, W.

ACUTE LYMPHOCYTHÆMIA.[1]

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THE case which I bring before this society to-night is of great pathological interest and serves to illustrate some very important problems associated with this disease and also with severe anæmias in general. The history of the case is as follows. A man, aged 37 years, was admitted into St. Thomas's Hospital, under the care of Dr. H. G. Turney, on August 29th, 1904. The patient's father and mother were said to be suffering from syphilis at the time of his birth. There is nothing else of interest in either the family or past history. The present illness appears to date from the beginning of July of this year. The patient was having his holidays and he noticed that he was unable to go about and enjoy himself as he wished to do, because he was so easily fatigued. His friends noticed that he was becoming anæmic. In the early part of August he was compelled to take to his bed owing to increasing weakness and severe persistent headache. On August 27th he came to St. Thomas's Hospital for treatment as he wished to leave for South Africa as soon as it was possible.

On admission to the hospital the patient was found to be intensely anæmic and in a very weak condition. The state of his mouth was extremely bad. There were a large number of stumps in both the upper and lower jaws and a quantity of offensive pus oozed up from around the fangs. The gums showed a great tendency to bleed and were pale and spongy. Large and tender glands could be felt in the submaxillary triangle and around the lower jaw. On examination of the chest there was some evidence of emphysema, otherwise the lungs were found to be normal. The heart was found to be normal to inspection, palpation, and percussion, but a soft systolic murmur could be heard at the apex and at the left base. The murmur was quite localised at both these situations. The radial pulse was 100, regular, and of fair tension. The vessel wall was thickened. The spleen was found to descend about one and a half inches below the left costal margin and this viscus also extended upwards for some distance above the normal limits. There was no friction rub heard. The spleen was of very firm consistence. There was a considerable increase of the area of liver dulness. The lower edge could be felt about the level of the umbilicus. The surface was smooth and the free edge was hard. There was nothing else abnormal in the abdomen. There was no evidence of ascites. There were no true glandular enlargements in the lymphatic system beyond what has already been referred to as a result of the septic condition of the patient's mouth. The nervous system did not present any abnormal features. The optic discs were found to be normal and there was nothing abnormal detected on examination of the retinæ. The conjunctivæ were extremely pallid. There was no tenderness of any of the bones. There were no abnormal changes in the skin. The urine was acid and was of specific gravity 1025; no albumin or sugar was found.

Examination of the blood.—The red cells were counted by a modification of Gowers's method, and the leucocytes by the Strong-Seligmann method. The hæmoglobin was estimated by Solly's modification of Oliver's hæmoglobinometer. The blood films were stained by Leishman's method. The results of the examination of the blood, on three separate occasions, are given below in a tabulated form. It is impossible to over-estimate the importance of a complete examination of the blood in all blood diseases. It is frequently stated in the literature that the lymphocytes, for example, were 52 per cent. Such a record is of no value. A differential count of leucocytes and the total number of each variety of leucocyte in a cubic millimetre of blood should always be given, otherwise the results which are obtained are of no scientific value.

Table showing the Results of the Examination of the Blood on Three Separate Occasions.

—	First examination, August 31st, 1904.	Second examination, Sept. 7th, 1904.	Third examination, Sept. 14th, 1904.
Erythrocytes	2,102,000 per c.mm.	1,665,000 per c.mm.	0,966,000 per c.mm.
Leucocytes	43,980 per c.mm.	73,200 per c.mm.	440,800 per c.mm.
Hæmoglobin	40·0 per cent.	25·0 per cent.	15·0 per cent.
Colour index	0·9	0·8	0·7 (nearly)
Approximate ratio between leucocytes and erythrocytes	1-46	1-23	1-2

Stained Blood.

—	First examination, August 31st, 1904.			Second examination, Sept. 7th, 1904.			Third examination, Sept. 14th, 1904.		
	Per cent.	Per 1000 cells.	Per cubic millimetre.	Per cent.	Per 500 cells.	Per cubic millimetre.	Per cent.	Per 500 cells.	Per cubic millimetre.
Polymorphonuclear neutrophiles	2·1	21	924	1·6	8	1,171	0·4	2	1,799
Small lymphocytes	62·7	627	27,588	46·2	231	33,818	9·0	45	40,482
Large lymphocytes	34·0	340	14,960	48·8	244	36,721	23·6	418	376,032
Large hyaline cells	0·4	4	176	3·0	15	2,196	6·3	34	30,586
Mast cells	0·0	0	0	0·0	0	0	0·0	0	0
Eosinophiles	0·8	8	352	0·4	2	292	0·2	1	879
Total mononuclear cells	97·1	971	42,724	98·0	490	71,735	99·4	497	447,100

Fresh blood and blood films were examined with the following results: On August 31st rouleaux formation (Hayem's method) was good. There was slight poikilocytosis present. A few microcytes but no macrocytes were

[1] An abstract of this paper was read before the Pathological Society of London on Nov. 1st. The diagrams which were shown so as to illustrate certain points in this paper will be reproduced in the Society's Transactions.

seen. There were no nucleated red cells present and no degenerative changes in the red cells. Many of the leucocytes had ragged edges and some showed a small ring in the centre of the nucleus. On Sept. 7th rouleaux formation was present. There was slight poikilocytosis. Fibrin formation was very well shown. The appearances of the red cells were found to be almost identical with those obtained at the first examination. On Sept. 14th there was no true rouleaux formation present. There was still only slight poikilocytosis. There were a few macrocytes and microcytes present, but no nucleated red cells or degenerative changes in the red cells were seen. Some of the mononuclear cells were very large and a certain proportion of these cells contained a few small basophilic granules. The blood films were carefully examined and some 2000 cells were counted, but only three definite neutrophilic myelocytes were seen.

Agglutination of the erythrocytes.—I wish to draw attention to a very important phenomenon which has been found to occur in the blood in cases of very severe anæmia. If a patient's ear is punctured and the blood is normal a definite red drop appears at the seat of the puncture. If, however, the patient has only 1,000,000 or less red blood corpuscles, as in the present case, the appearance of the drop is quite different. We see a drop of blood-stained serum in which are suspended numerous minute red granules. If blood-film preparations are made it is found that it is impossible to separate the red corpuscles as in health, because the cells are massed together in little clumps. Again, if the fresh blood is examined it is found that there is absence of true rouleaux formation, but the red blood corpuscles are seen to be in little clumps. Identical results are obtained if a hanging-drop preparation is made. The red blood corpuscles are therefore agglutinated in cases of *very severe* anæmia and this phenomenon will be found to occur in the large majority of cases. It has long been known that if we add physiological salt solution to normal blood the rouleaux formation is much less marked than normal. Mr. S. G. Shattock has shown that if horse serum is added to human blood the rouleaux formation is much more marked than normal. I have observed in cases of polycythæmia that the rouleaux formation is always much more extensive than in normal blood.

Klein has shown that if we wish to make a suspension of plague bacilli for serum reactions we must use physiological salt solution for the purpose, or else agglutination will be found to have occurred in the control culture. Douglas has recently shown that a 0·1 per cent. salt solution is more suitable for the preparation of a suspension of plague bacilli than the stronger solution. Crendiropoulo and Miss Amos have also shown that certain salts in certain dilutions inhibit the agglutination of micro-organisms. They found that a 1 per cent. solution of potassium chloride favours agglutination, whereas a 0·1 per cent. solution of the same salt prevents agglutination of the cholera vibrios. It is therefore evident from the above facts that various salts have an important bearing on the production of rouleaux formation and of agglutination of micro-organisms. Physiological salt solution can be shown to have a similar bearing on the agglutination of red blood corpuscles. If the blood which has been obtained from cases of severe anæmia and in which agglutination of the red blood corpuscles is known to occur is mixed with a drop of salt solution the red blood corpuscles will be found to lie quite isolated, just as takes place when plague bacilli are mixed with salt solution. It is possible that the agglutination of the erythrocytes which occurs in severe anæmia may be due to some alteration in the chemical constitution of the plasma but at present there is not any direct proof either for or against such a theory. It is also probable that this agglutination of the red cells which has been shown to occur in the blood as it escapes from a small puncture of the skin, and which is therefore probably present in the blood stream, may be the cause of capillary thrombosis. This complication in severe anæmia has been known to occur for some time past but no satisfactory explanation has been offered. The idea that it is due to an agglutination of the red blood corpuscles in the capillaries is, as I have shown, a most likely explanation.

Bacteriology of the blood.—20 cubic centimetres of blood were withdrawn from the basilic vein of the right arm and mixed with hot agar at the temperature of 44° C. The mixed blood and agar were poured into three large Petri dishes and incubated at 37° C. On each plate small white colonies were obtained of the staphylococcus albus.

Notes while the patient was in the hospital.—I will only give the most important notes which have a direct bearing on the pathology of the disease. As regards the temperature, there was pyrexia of an irregular remittent type during the whole period of the patient's illness while under observation in the hospital. There was never any very high temperature recorded. There were never any subcutaneous hæmorrhages or petechiæ seen. The condition of the mouth gradually became worse and on several occasions the patient had a severe hæmorrhage from the gums. Two hæmorrhages were seen for the first time four days before he died, in the right disc and retina and one or two dark spots which might have been due to capillary thrombosis. There was never any true glandular enlargement. The urine remained normal during the entire course of the illness. There was never any diarrhœa or vomiting. The bones were never tender.

Necropsy.—At the post-mortem examination (which was performed by Dr. E. A. Gates) the body was found to be well nourished and the subcutaneous fat was of a bright yellow colour. The mouth was in a septic condition and enlarged glands were found in the submaxillary triangle. There was no enlargement of the tonsils or of the papillæ of the tongue. The thymus gland was atrophied. There were no enlarged mediastinal or bronchial glands. There were no pleural adhesions but a small amount of slightly blood-stained fluid was present in each pleural sac. The lungs were very œdematous but contained air throughout their entire substance. The right lung weighed 34 ounces and the left lung 24½ ounces. The heart weighed 13½ ounces. The valves were competent and healthy. The heart muscle was soft and very pale. Numerous punctiform hæmorrhages were seen beneath the endocardium of the right auricle. The clot in the cardiac chambers and in the large blood-vessels was of a pale pink colour. The aorta was healthy. The spleen weighed 23½ ounces. There was some evidence of old perisplenitis. The cut surface was pale and soft. There were no nodular enlargements visible to the naked eye. There was no enlargement of the mesenteric glands. Extending downwards all along the vertebral column from the level of the cœliac axis there were a very large number of large red, soft, and succulent glands. The liver was found to weigh 71½ ounces. The surface was very irregular and the capsule was thickened. There were no nodules visible to the naked eye. Dr. C. R. Box suggested that the liver should be examined for the free iron reaction. An intense blue reaction was obtained. The pancreas and adrenals appeared to be normal. The kidneys were found to weigh 14½ ounces; both organs were enlarged and of about the same size. The capsule of the right kidney was adherent, the surface was pale, the cortex was narrowed, and there were numerous small cysts on the surface beneath the capsule. The left kidney was of a purple colour and the cortex was swollen. The capsule was adherent but less so than in the case of the opposite kidney and there were no cysts visible on the surface. We could not detect any nodules either on the surface or in the substance of either kidney. The intestines from the duodenum to the rectum were normal. There was no enlargement of the lymphoid tissue. Numerous hæmorrhages were seen beneath the mucosa of the stomach. Enormous numbers of minute capillary hæmorrhages were visible on the surface of all the viscera and in the adipose and connective tissue throughout the body; in fact, the skin appeared to be the only portion of the body which was exempt. The brain appeared to be normal to the naked eye. An ossified plate about half an inch by three-quarters of an inch was found in the falx cerebri. We took pieces of several ribs and also a portion of the right femur. The rib marrow was very soft and not over abundant. It resembled thin, pale, reddish-yellow pus. The femur was in a condition of chronic osteitis. The medullary cavity was obliterated and the outer surface of the bone was rough and irregular. A small quantity of bright yellow fat was obtained with difficulty from the centre of the femur owing to the spicules of bone which filled up the central canal.

Microscopical histology.—The main bulk of the femur marrow was adipose tissue but in places there were large masses of closely packed cells. No free iron reaction was obtained. Sections were stained by Leishman's method, with the following result. There were numerous small, darkly stained nucleated cells present but the large proportion of the cells had a large pale nucleus which almost completely filled them. Only a very few of the cells showed an indentation of the nucleus. We failed to demonstrate any neutrophilic

granules in any of these cells. No eosinophiles or mast cells were found in any of the sections. Only a few nucleated red blood corpuscles were seen. In the rib marrow the cells were much more closely packed together than is found in healthy marrow. No gaint cells were seen, although a very large number of sections were examined; in fact, we did not observe any small multinucleated cells. Only a slight reaction for free iron was obtained. The sections of the rib marrow, which were stained by Leishman's method, appeared to have an almost identical structure with the femur marrow. A few normoblasts but no megaloblasts were seen in the various sections. A differential count of the marrow cells was made. The total number of cells which were counted was 500. The result was as follows:—

Small mononuclear cells	144	... ...	28·8 per cent.
Large mononuclear cells	354	... ...	70·8 ,,
Large hyaline cells	2	... ...	0·4 ,,
	500		100·0

Eight normoblasts were seen while counting 500 white cells.

The sections of the hæmolymph glands which were stained with Leishman's stain were found (with a $\frac{1}{12}$th oil immersion lens) to be very similar to the structure of the rib and femur bone marrow and to the spleen. We noticed with a low-power objective that the blood sinuses were packed full of cells which with a high power were similar to those already described in the bone marrow although in a different proportion. These cells were also found in large numbers in the capsule of the gland and in the connective tissue stroma which extended into the gland substance. Only a slight reaction for free iron was obtained. A differential count was made of the cells found in the hæmolymph glands and the result was as follows:—

Small mononuclear cells	269	... ...	53·8 per cent.
Large mononuclear cells	228	... ...	45·6 ,,
Large hyaline cells	3	... ...	0·6 ,,
	500		100·0

One normoblast was seen.

In a lymphatic gland from the groin the gland tissue was largely replaced by fat. These areas of fat were simply bounded by small mononuclear cells. Lymphocytes were present in large numbers in the capsule of the gland and in the connective tissue septa. There was no endothelial cell proliferation to be seen throughout the gland. The small lymphocyte was found to be the chief type of cell present, but there were also present cells which resembled the large mononuclears which we have described as the predominant type in the bone marrow. Film preparations were made from scrapings of the surface of the spleen and were stained by Leishman's method. The large majority of cells present were similar to the large type of bone marrow cell in which I was unable to demonstrate neutrophilic granules. No parasites were seen. There was no evidence of fat in the sections stained by Busch's method. There was only a very small amount of free iron present in sections of the spleen. No Malpighian bodies could be identified in any of the sections. The capsule of the spleen was thickened and coarse fibrous bands passed in all directions throughout the splenic tissue. The lumen of the blood-vessels in the capsule and in the fibrous bands was almost entirely filled with lymphocytes. No multinucleated cells of any kind were seen. There was a large amount of fat present in the liver. It was seen to be in the hepatic cells either as large drops, or most constantly as a fine granular deposit. An enormous free iron reaction was obtained and it was observed that the iron was scattered throughout the liver tissue and was not confined to any definite region. The glycogenic reaction was negative. The capsule of the liver was thickened and there was also a certain amount of fibrous overgrowth. The hepatic cells were very much degenerated and in places were unrecognisable. The whole organ was riddled with round-cell infiltration.[2] The type of cell which we met with in the various viscera appeared to be identical in its morphological and staining properties with the large mononucleated cell already referred to. There was a large amount of fat present in the tubules of the kidneys and a few droplets of fat could be seen in most of the glomeruli. The round-cell infiltration was very extensive in both kidneys. There was some thickening of the capsule of the right kidney. The kidney tissue proper was largely replaced by fibrous tissue. Both kidneys showed changes which were characteristic of chronic interstitial nephritis but the right kidney more so than the left. The lymphocytic infiltration was most marked in both kidneys; it affected all the structures but perhaps more especially the renal tissue proper. The alveolar walls of the lungs were infiltrated with lymphocytes and the capillaries were entirely filled with these cells, otherwise the lung tissue appeared to be normal. The capillaries beneath the epicardium and also those throughout the heart muscle were packed with lymphocytes. There were also large patches of these cells throughout the muscular tissue. There was no increase of fibrous tissue. Many of the muscle cells were degenerated. In some the transverse striation was completely lost and in others the nuclei were either degenerated or completely lost. The round cell infiltration of the heart muscle was very clearly shown between the individual cells. No micro-organisms were seen in any of the microscopical sections of the various viscera.

Chemical analysis of the liver.—A specimen of the liver was sent to Dr. H. R. Le Sueur, consulting chemist to the hospital, who issued the following report: "The total weight of liver received amounted to 127·5 grammes. The inorganic residue measured 1·9 per cent. and the amount of iron was found to be 0·17 per cent." If we refer to Dr. W. Hunter's work on "Pernicious Anæmia" we find recorded an analysis of the liver in various diseases. The chief results are given below in a tabulated form:—

Pernicious Anæmia.

Number of cases.	Author.	Result (average).
4	Hopkins	0·458 per cent. of iron.
6	Hunter	0·332 ,, ,,
2	Stockman	0·185 ,, ,,

Total average for the 12 cases, 0·325 per cent.

Leukæmia.[3]

1	Hunter	0·140 per cent. of iron.
1	Stockman	0·337 ,, ,,

Average for the two cases, 0·238 per cent.

Ankylostomiasis.

5	Stockman	0·030 per cent. of iron.
5	Rake	0·125 ,, ,,

Average for ten cases, 0·077 per cent.

Professor R. Stockman found, on an analysis of four healthy livers, 0·080 per cent. of iron. It is therefore obvious that there was considerable hæmolysis in our case. Professor Stockman found from an analysis of two cases of pernicious anæmia slightly more iron than Dr. Le Sueur found in our case, but there was much more iron present than in the recorded cases of ankylostomiasis. The two cases of leukæmia which are referred to in this paper showed much more evidence of hæmolysis than was found in our case. Dr. Hunter says: "The nearest approach to the average in pernicious anæmia is made in leukæmia and malaria—i.e., conditions which present clinically no difficulties in regard to diagnosis from pernicious anæmia."

Most observers will agree that acute lymphocythæmia is a disease in which the bone marrow is now known to play a very important part, just as occurs in cases of myelæmia. The hæmolymph glands also appear to have a very important share in the pathology of this obscure disease. It is impossible to over-estimate the importance of a careful and complete examination of all the viscera, including the bone marrow and glands, in this disease. Our case shows the importance of this statement when we consider the difference which existed between a naked eye and a microscopical examination of the femur marrow. It would be preferable for the term "lymphatic leukæmia" to be replaced by either "acute leukæmia"—i.e., using the term "leukæmia" in its very widest sense—or still better—"acute lymphæmia" or "lymphocythæmia." To describe lymphocythæmia as lymphatic leukæmia is as incorrect as to describe myelæmia as splenic leukæmia.

It has been suggested by various observers that acute lymphocythæmia is really acute myelæmia; that is to say, the cells which form such a characteristic feature of the blood are really myelocytes, not lymphocytes.

[2] Dr. F. Parkes Weber objects to the term "infiltrated" and prefers to use the word "permeated," as the latter term does not imply, which the former does (in his opinion), that the cells have been deposited in the tissues from the blood stream.

[3] Dr. Hunter, unfortunately, does not state from which variety of leukæmia the results were obtained.

a theory which was introduced by Askanazy. Let us carefully compare the changes which are found in the blood in myelæmia and acute lymphocythæmia. The number of red and white cells in each disease is of little importance in the question under discussion. If we examine the blood of a patient suffering from myelæmia we find that there are certain changes in the red and white cells which are absolutely diagnostic of the disease. There is no known disease of adult life in which we find such enormous numbers of nucleated red blood corpuscles as in myelæmia. If the patient who is the subject of this disease suffers at any time from a hæmorrhage from the gums, or elsewhere, we shall find that the number of normoblasts, megaloblasts, and microblasts is extremely large, especially the number of normoblasts. Polychromatophilic degeneration is usually well marked in such cases but granular degeneration is not. Numerous macrocytes[4] and microcytes and well-marked poikilocytosis are usually present. Now, if the case is an example of acute lymphocythæmia we shall find an absolutely different picture. Nucleated red blood corpuscles in this disease are either extremely few or completely absent, even after severe hæmorrhages, as our case so well illustrates. Polychromatophilic and granular degeneration are either slight or more frequently absent. It might be supposed that the number of nucleated red blood corpuscles was due to the fact that myelæmia is usually a chronic disease. Such a view would, however, be erroneous. Hermon Gordinier has recently reported a case of acute myelæmia in the *Johns Hopkins Hospital Bulletin* in which the patient only lived four months from the commencement of the illness. The author stated that normoblasts were common in the blood in his case, but that "an occasional megaloblast was present, perhaps one to every second or third field. No count of the nucleated red cells was made." This statement, however, requires modifying. If one megaloblast was present in every second or third field a very large number of such cells would be seen during a differential count of 500 or 1000 leucocytes, when we consider that the patient had 260,000 leucocytes per cubic millimetre of blood. An extremely valuable case of acute myelæmia has been recorded by Billings and Capps. The patient's illness in this case began in August, 1899, but Dr. Richard Cabot who examined the blood found it to be normal. On Sept. 20th the patient was much worse and had 2160 nucleated red cells in a cubic millimetre of blood, most of which were normoblasts. On Oct. 7th there were 2618 nucleated red cells in a cubic millimetre of blood. If we now examine the white cells in leukæmia we are brought face to face with some very important facts. If numerous mast cells are found in a specimen of blood it is justifiable to diagnose myelæmia. In normal blood we rarely find more than two mast cells while counting 500 leucocytes, but if from 5 to 10 per cent. are found in the blood it is practically certain that the patient from whom the specimen of blood was obtained is suffering from myelæmia. In one case of myelæmia I found 17 per cent. of these cells in the blood. In lymphæmia, however, this type of cell is only present in the blood in very small numbers and is never increased, but also in many of the recorded cases of acute myelæmia there has not been any increase, or only very slight increase, of the number of mast cells.

In the literature the term "myelocyte" is used in a very wide sense. There are numerous varieties of myelocytes and to classify all forms under one head is not only incorrect but most misleading. If the blood in myelæmia is carefully examined at least four varieties of myelocytes (neutrophilic, eosinophilic, basophilic, and amphophilic) will be found in every case. Those observers who consider that acute lymphocythæmia is really acute myelæmia—i.e., that the apparent lymphocytes are really myelocytes—appear to forget this fact. They use the term myelocyte as if every myelocyte was neutrophilic. They even go further and classify myelocytes as mononucleated cells, frequently non-granular. This is indeed a bold assumption, although it is not usually considered as such. We all know that in chronic myelæmia there are a certain proportion of mononucleated cells which are usually very large non-granular cells and are often classified as myelocytes. These cells consist of a pale degenerated nucleus which is surrounded by a narrow rim of cytoplasm but even here we are not absolutely justified in our conclusion. In acute leukæmia (lymphocythæmic type), however, the large majority of cells have a definite blue nucleus (eosin-methylene blue stain) surrounded by a rim of basophilic cytoplasm and would be described as lymphocytes but for the unfortunate fact that they are present in enormous numbers. It is unjustifiable to my mind to describe these cells as non-granular myelocytes. If this was a purely clinical question it would not matter whether these cells were called myelocytes or lymphocytes, but it is a matter of very great pathological importance and therefore should be treated as such. In acute lymphæmia definite neutrophilic myelocytes are found in very small numbers and also the large cells which resemble the large mononuclear cells such as are found in the blood in myelæmia, but the great majority of the cells are identical to the lymphocytes of normal blood except that a good many of the large lymphocytes have ragged edges and also a few granules which appear to be basophilic. These granules are usually demonstrated in the cells in those cases in which a Romanowsky stain has been used. It is well known that the basophilic granules which are found in the red cells in certain diseases are only to be seen in those cases in which some sample of this stain has been used. It also shows up the basophilic granules in the lymphocytes in normal blood and in the various anæmias, which otherwise would never have been demonstrated. Much more valuable results would be obtained in the future if greater care was given to the recognition of a myelocyte. Many of the so-called polymorphonuclear neutrophiles which are present in children's blood and the large majority in the blood of kittens and puppies are really polynuclear cells without any neutrophilic granules, but the nucleus of these cells is diagnostic. There is nothing, however, diagnostic about the nucleus of a neutrophilic myelocyte, although in many of the neutrophilic myelocytes (large type) which are only found in chronic myelæmia the nucleus is quite unlike anything which we see in normal blood or in any disease apart from leukæmia. The granules of a neutrophilic myelocyte, of course, are similar to the granules which are present in polynuclear neutrophiles. If, however, those observers are correct who consider that the large lymphocytes which are found in the blood in acute lymphocythæmia are non-granular myelocytes, then we have a condition of the blood which is unique—viz., almost the entire cells atypical myelocytes without neutrophilic granules. In the recorded cases of acute myelæmia eosinophilic myelocytes have been present in every case, sometimes in large numbers. In Gordinier's case which has already been quoted 4·1 per cent. of these cells were found in the blood. It is impossible to demonstrate basophilic granules with Ehrlich's stain and, therefore, in the recorded cases in which this was the only stain employed this type of cell would be overlooked.

In the recorded cases of acute myelæmia polynuclear neutrophiles and eosinophiles have been considerably reduced in relative proportion but greatly increased in absolute numbers. In the other variety of acute leukæmia we have an entirely different picture. The lymphocytes amount to 80, 90, and even 99 per cent. of the total number of white cells, of which the large majority are usually large lymphocytes (myelocytes of some observers), but the polynuclear neutrophiles, eosinophiles, and mast cells are reduced relatively to a minimum and absolutely below the normal. Eosinophilic, basophilic, and amphophilic myelocytes are rarely met with. When the bone marrow is examined in cases of acute myelæmia it is said that it consists almost entirely of myelocytes and to a less extent of nucleated red blood corpuscles, eosinophiles, eosinophilic myelocytes, and large mononuclear cells. In acute lymphocythæmia a few normoblasts are found but the large majority of the cells are large and small mononuclear cells which do not contain any granules. A case of acute leukæmia has recently been reported before the Pathological Society of London by Dr. F. Parkes Weber in which the blood was *not* examined during life. A specimen of the blood was obtained at the necropsy and was examined by Dr. G. L. Eastes who found that the cells were chiefly non-granular lymphocytes, but 3·6 per cent. of eosinophilic myelocytes were also found. The bone marrow which was obtained from the shaft of the femur was of a creamy blood red colour but not diffluent. It was examined by Professor Robert Muir who found large numbers of eosinophiles and mononuclear cells and also in the spleen and bone marrow cells which had the characters of eosinophilic myelocytes. Professor Muir remarks: "I have never seen eosinophil cells in such numbers in the tissues in lymphatic leukæmia, yet the

[4] The most perfect macrocytes are found in the blood in cases of anæmia of the pernicious type.

case appears to be of that nature." It is most unfortunate that the blood was not examined during life in this case, as it appears from the result of the microscopical examination of the tissues that the case was atypical and also that it is the only recorded case in which so many eosinophilic cells were found in the blood. Leube has lately drawn attention to a disease to which he has given the name of leukanæmia. It is a disease which has some of the characteristic features of pernicious anæmia and some of leukæmia. It has been suggested that some cases of lymphæmia and myelæmia are of this class. In such cases the red cells show changes similar to those which are found in so-called pernicious anæmia but there has been a leucocytosis (lymphocytic or myelocytic) and leukæmic infiltration of the viscera. I do not think, however, in our case that such a diagnosis could possibly be made. In conclusion, I consider that acute lymphocythæmia is a disease with definite hæmatological characters and with certain changes in the various viscera by which it can be diagnosed from acute myelæmia.

My best thanks are due to Dr. Turney for giving me permission to make use of the entire pathological material derived from this case.

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TWO CASES OF SEVERE CRANIAL INJURY.

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THE two following cases present points of interest. Case 1, the apparently more severe one—viz., compound comminuted fracture of the skull—ended in complete recovery within an exceptionally short period; while Case 2, an apparently slight injury, resulted in death within three hours. In both cases there was an absence of subjective symptoms, for neither owned to any particular pain or distress, though the first presented a shocking distortion and laceration of the face, including exposure of the dura mater and escape of cerebro-spinal fluid.

CASE 1.—A man, aged 27 years, descended a steep hill on his bicycle at great speed. At the bottom he ran into a wall built at a right angle to the direction in which he was travelling. His head struck one of the large blue slate stones of which the wall was built, splitting it in two. He was conveyed to the surgery a mile distant, where he sat and answered questions while his injuries were attended to. There was a compound comminuted fracture immediately below the right frontal eminence extending into the frontal sinus and passing backwards to an unknown extent. The opening was triangular in shape, about one inch by three-eighths of an inch; at the bottom of the wound the pulsations of the brain were distinctly visible. The dura mater was torn and cerebro-spinal fluid was escaping freely. Six quite loose fragments of bone were removed and one sharp spicule of a larger fragment which pressed on the dura mater was clipped off; other fractured portions were allowed to remain. Besides this injury the nasal bones were crushed in, the right zygoma was fractured, and there was a compound fracture of the left superior maxilla. The lower lip was completely torn through in the middle line and the mucous membrane was reflected off the alveolar portion of the lower jaw as far back as the right first molar tooth. A wound on the upper surface of the tongue nearly divided it through on the left side.

During the first three days a large quantity of cerebro-spinal fluid was lost; this gradually diminished until it ceased to escape at the end of the second week. The patient made an uninterrupted and rapid recovery. He was out of doors ten days after the accident and was perfectly well at the end of three weeks.

CASE 2.—The patient, a married woman, aged 37 years, in mounting her bicycle caught her dress in the pedal, overbalanced, and fell on her left side. Her head came in contact with the ground, breaking her hair comb and causing a superficial abrasion which bled for about three minutes. On being joined by her husband within one minute of the occurrence of the accident she was perfectly conscious and standing up. She said she was not much hurt and would ride her bicycle back to the village, but ultimately decided to walk. This she did, a distance of two and a half miles, and appeared to be chiefly concerned about her machine. On arriving at the house she walked upstairs, undressed, and lay down. Then, two hours after the accident, she first complained of deep-seated pain in her head. As her friends thought she was "faint" brandy was given and medical aid was called. When first seen, two and a quarter hours after the accident, the patient was very drowsy and unable to answer questions. There was a small hæmatoma of the scalp over the left parietal bone. The left pupil was slightly larger than the right. The head was at once shaved preparatory to trephining for the left middle meningeal artery. Pupil changes rapidly supervened and complete loss of consciousness with stertorous breathing followed. Unfortunately the patient died before the instruments arrived. A post-mortem examination was not obtained but death was caused by compression of the brain by blood, probably from a ruptured left middle meningeal artery due to fracture of the left parietal bone.

Windermere.

A CASE OF CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS IN THE ADULT.

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With Full Report of the Post-mortem Examination by JOHN ANDERSON, M.B., C.M. Glasg., *Pathologist to the Infirmary.*

IN December, 1903, I read a paper before the Clinical Society of London entitled "Congenital Narrowness of the Pyloric Orifice" and narrated the histories of half a dozen cases which I believed to be illustrative of such a condition. In none of these cases was there any hypertrophy of the pyloric ring but solely an abnormal development of the pyloric valve whereby the latter was broadened and the orifice correspondingly narrowed. The present case, however, is a type of that more commonly met with in its advanced stage in early life and only resembling the other form in the lateness with which the symptoms of obstruction manifest themselves. The case which I am about to report resembles in a very striking way the form of stenosis previously described by Professor Rudolf Maier of Freiburg. I will, however, narrate the history of the case before passing further remarks upon it.

A man, aged 31 years, was admitted into the medical side of the Victoria Infirmary on March 12th, 1903, under the care of Dr. Ebenezer Duncan, in whose charge he remained until the 23rd, when he was transferred to the surgical side. His illness commenced about three years previously with a feeling of heaviness and oppression over the sternum coming on shortly after taking food. In the course of a month or so he began to suffer from water brash and gradually the feeling of oppression changed into distinct pain. During the earlier part of his illness he vomited after food with immediate relief of his pain. Four days would often elapse without any vomiting. Seven months previously his symptoms increased in severity. The pain occurred regularly after every meal and in the course of about half an hour was followed by vomiting with relief of the pain. So long as he took milk and fluid diet his suffering was slight. His appetite was always good at the earlier stages of his illness but latterly it had become less so. In addition to the pain felt after food he was nearly always conscious of a burning

acrid sensation in the epigastrium. He stated that within seven months he had lost about two stones in weight.

On admission into the infirmary he was seen to be distinctly emaciated. His tongue was covered with dirty yellowish-brown fur, the teeth were carious, but the breath was not noticeably foul. There was no enlargement of the liver. Slight epigastric tenderness was present. There was no succussion. The urine was acid, of specific gravity 1028, and contained no albumin. He stated that he had never vomited blood or, so far as he knew, ever passed blood per rectum. Neither did it appear that he had ever been jaundiced. He had been moderate both as a smoker and as a consumer of alcohol. A test breakfast was given; no free hydrochloric acid or lactic acid was detected. The stomach was inflated and was seen to extend down to the umbilicus and over towards the right. The air could be heard rushing through the pylorus.

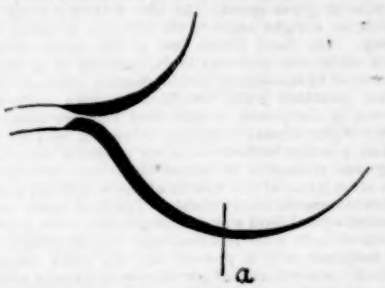
On March 26th posterior gastro-jejunostomy was performed. Prior to opening the stomach a digital examination proved the absence of any adhesions. The duodenum was perfectly normal but at the pylorus there was uniform thickening which extended away to the left, apparently passing insidiously into the body of the stomach. Beyond this uniform enlargement nothing else could be detected. The opening into the stomach was close to the greater curvature and from three to four inches from the pylorus. The gastric parietes appeared to be about five millimetres thick and a piece was excised for microscopical examination. A digital examination of the interior of the stomach revealed a smooth lining of mucous membrane with a tight, uniform ring-like constriction at the pylorus. The patient made an uninterrupted recovery. Dr. Anderson reported that the piece of tissue sent for examination contained no malignant elements and consisted entirely of hypertrophied muscular wall.

On Feb. 20th, 1904, the patient was readmitted under the care of my colleague Dr. Duncan, to whom I am indebted for the remaining notes of the case until his decease on Oct. 11th. At this time he was complaining greatly of thirst and for more than a month he had been trying to quench it by drinking quantities of soda-water and sour milk. He had been gradually losing flesh, although there had been no return of his earlier gastric symptoms and he had been able to eat solid food. His skin was very dry and on examination of the abdomen there was no evidence of succussion or any abdominal tenderness. He was passing large quantities of urine which was neutral in reaction and of specific gravity 1012. There was no albumin. Sugar was found but in small amount, five cubic centimetres of urine being required to reduce five cubic centimetres of Fehling. His chief complaint was headache and feeling of weakness. He remained under treatment for about three weeks, when he was dismissed much improved.

On Sept. 16th he was again admitted under Dr. Duncan complaining of increasing weakness and general pains all over his body, and although not troubled with his stomach his appetite had failed and he was taking very little nourishment. His urine was slightly alkaline and of specific gravity 1021. There were no albumin and no sugar. He gradually got into a mentally lethargic condition with no otherwise marked symptoms and died from increasing exhaustion on Oct. 11th.

Report of the post-mortem examination by Dr. ANDERSON.—The body was well developed but very emaciated. Rigor mortis was pronounced. The pupils were equal and of medium size. There were a healed gastro-jejunostomy wound in the upper segment of the abdomen and an eczematous condition of both ears. The pericardium was healthy. The heart, which weighed 6½ ounces, was small and atrophied in appearance. The muscular tissue was of fairly firm consistence but of a dull brown colour. The chambers were small in size and their walls were thin. All the valves were healthy. The lungs were adherent to the chest wall by a few fibrous bands on the posterior surface, by a firm adhesion at the right apex, and over an area of thickened pleura at the left base. On section, both lungs showed a moderate degree of passive congestion; the free edges were emphysematous and in the apex of the right lung there was a healed tuberculous lesion. At the base of the left lung there was an area of thickening of the visceral pleura which measured two inches in diameter and was one-sixteenth of an inch thick. A microscopic examination showed it to be of a tuberculous nature. The scar in the abdominal wall was that of a well-healed wound. The stomach was small in size and contracted and presented healthy appearances of its serous and muscular coats, but the mucosa showed evidence of a chronic gastric catarrh with slight excess of mucus on its surface. The pylorus was stenosed and rigid, the aperture being sufficient to admit a No. 10 catheter, and when cut through it showed a hypertrophied condition of the pyloric ridge. The gastro-jejunostomy opening was fully patent and allowed of the insertion of the thumb, while the position of parts was fully satisfactory. The small intestine was thin-walled and when opened it showed no obvious lesion apart from the general atrophy. There was no distension. The large intestine presented normal appearances but the wall was likewise thin. The liver was of small size, dark in colour, but of normal consistence. At the lower edge of the right lobe there was a marked thickening of the capsule not unlike that of a healed gumma. This area of thickening was about three inches in diameter and other two areas of the size of a hazel nut were also seen on the anterior surface of the organ. The gall-bladder contained about one ounce of dark-coloured bile; its walls were healthy. The spleen was of normal size; there were one or two adhesions to the diaphragm and the capsule in places was thickened. On section the organ showed an increase in the fibrous stroma and was of a dark purple colour. The kidneys were of normal size and congested. Their capsules were non-adherent. On section a slight diminution in the area of the cortex with induration was noted. The bladder was healthy. The pancreas was rather smaller than the normal size, slightly congested, and flattened from before backwards. The lobules were large in size and the organ was of dense consistence. There was an absence of fat around the gland. Wirsung's duct was traced into the duodenum where it entered along with the common bile duct at the papilla major, but no evidence of the accessory duct was found.

Microscopic examination of the organs.—The lesion at the right apex was of the nature of a fibroid phthisis. The thickening of the pleura at the left base was from a chronic tuberculous pleurisy. The sections of the liver showed a slight increase of fibrous tissue in the portal areas, passive congestion, and yellow pigmentation of the hepatic cells. The thickened capsule was composed of well-formed fibrous tissue and fibrous strands extended from it into the substance of the liver. The sections of the kidneys and the spleen showed a condition of chronic fibrosis. The sections of the pancreas showed an increase of fibrous stroma throughout the gland in the periphery of the lobules and especially well marked around the ducts, the walls of which appeared to be thickened. The islands of Langerhans were well represented and showed no special features. The glandular parenchyma was fairly healthy. The vessels were congested. The sections of the pylorus showed an atrophic appearance of the mucous membrane. The submucous coat was not hypertrophied. The muscular coat was well developed and hypertrophied, with areas of new formation of fibrous tissue between the muscular bundles. There were no evidence of healed ulceration and no malignancy. Sections of several parts of the stomach wall were also prepared and showed



the results of a chronic gastritis. The mucous coat was atrophied with loss of glandular structure, the submucous coat was increased in thickness with fibrous tissue formation, and there was a slight fibrous tissue increase in the intermuscular layers with no obvious increase in thickness of the muscular coat. The small intestine was examined at various parts, but the conditions found were those of a general atrophy.

Remarks by Mr. MAYLARD.—A reference to the figure will show the condition of the stomach at the time of operation.

The point *a* indicates the spot at which the anastomosis was effected and where a small piece of the stomach wall was removed for microscopical examination. As has been stated, the wall was about five millimetres thick and was composed of fibrous tissue and hypertrophied muscle. As is sufficiently well known, simple fibrous or cicatricial obstruction of the pylorus leads to dilatation of the pyloric antrum, and never, so far as my experience goes, to an amount of hypertrophy and thickening at all comparable to that which existed in this case. Taking into consideration therefore these factors, the absence of any indication of old ulceration, the uniformity of the constriction of the pyloric orifice, the gradual tapering off of the hypertrophied gastric wall from the pylorus towards the body of the stomach, the absence of any malignant element, the age of the patient, the history of the case embracing the insidious onset of the dyspeptic symptoms—taking, I say, these facts into consideration, I was led to class the case among those comparatively rare examples of congenital hypertrophic stenosis occurring in the adult; that is to say, a form of stenosis usually met with in its severer type at an early period of life, but when less severe not giving rise to symptoms until later years. The condition appeared to me to conform to the particular type described by Maier,[1] where the pyloric portion of the stomach presented the appearance of a "filler" or "funnel" (trichterförmig). The post-mortem examination failed to elicit the cause of death. The atrophied condition of the gastric glands seemed to suggest a long-standing irritation of the mucous membrane probably the result of the prolonged and gradually damming back of the ingesta. The opportunity afforded of examining the condition of the parts connected with the operation of gastro-jejunostomy about 19 months after its execution was of interest. The artificial orifice admitted the thumb, was uniform and smooth in outline, and the mucous membrane of the attached jejunum showed no signs of ulceration or irritation the result of the direct passage of the gastric juices into the bowel.

Considering all things, it does not seem possible to connect the cause of death in any way with the consequence of operation. If one ventured a surmise in the absence of any possible revelation associated with an examination of the brain—which unfortunately was forbidden by the friends—it would be that diabetes, of which there were evident symptoms at one time during illness, had been the cause of death. That congenital hypertrophic stenosis of the pylorus is a cause of gastric disease in adult life there can be but little doubt, and in all probability it is more frequent than is generally supposed. In a paper read before the Royal Medical and Chirurgical Society by Dr. E. Cautley and Mr. Clinton T. Dent[2] in December, 1902, the authors refer to several cases of this nature, and there seems no reason for doubting that from whatever cause the hypertrophic stenosis arises it may vary considerably as to the amount of obstruction present, and according to the patency of the orifice so are the symptoms early or late in their appearance.

Glasgow.

NOTES UPON TWO RENAL CASES.

BY W. H. CLAYTON-GREENE, M.B., B.C. CANTAB., F.R.C.S. ENG.,

SUPERNUMERARY SURGEON IN CHARGE OF OUT-PATIENTS TO ST. MARY'S HOSPITAL, PADDINGTON; JUNIOR SURGEON TO THE FRENCH HOSPITAL, SHAFTESBURY-AVENUE, W.C.

As the following cases appear to me to present certain points of uncommon interest I venture to record them.

CASE 1. *A moveable kidney with complications.*—The patient, a woman, aged 66 years, came to the French Hospital in November, 1903, with a freely moveable right kidney. She complained of considerable pain and was unable, according to her account, to continue her work as cook owing to the frequent attacks of trouble. There was nothing abnormal in the urine but on examination the right kidney was found to be so loose that it could be displaced into the iliac fossa; it was slightly enlarged and tender. The patient was a woman of spare frame whose general health had been excellent until the last nine months previous to her admission, during which time she had suffered from frequent attacks of vomiting and from pain in the right kidney region. There were no contra-indications to operation so the kidney was exposed by a lumbo-inguinal incision and as its appearance did not suggest any organic disease it was sutured to the muscles of the posterior abdominal wall by sutures of silkworm gut which passed well into the kidney substance. The capsule proper was not split and the wound was closed in the usual manner. The course of the case was entirely favourable until the sixth day, when it was found that there was a slight leakage of urine. This appeared to come from the middle of the wound where the deepest suture had been passed into the kidney. The amount of urine which escaped daily varied from two to four drachms. A number of expedients were tried to close the fistula which at the end of 14 days presented a typical pouting appearance. Although the cautery certainly diminished the discharge it did not completely stop it, so that some three weeks from the original operation the middle part of the wound was opened up and three deep stitches were removed. The fistula gradually closed and the patient was discharged from the hospital with the kidney firmly fixed to the lumbar region five weeks from her admission.

In May, 1904, she was admitted to St. Mary's Hospital for recurrence of pain in the kidney which on examination was found to be enlarged and somewhat moveable. With regard to this latter point there was some difference of opinion as, although during deep inspiration a certain feeling of mobility was communicated to the hand, the main mass against the posterior abdominal wall seemed fixed. The original wound was soundly healed and the general health was good. The urine was normal but as the kidney was markedly enlarged a second operation was performed, the kidney being exposed through the old incision. There was a firm scar and the fibrous capsule of the organ, the internal capsule proper, was fixed to the surface of the quadratus lumborum, but on opening this there was an escape of an ounce or more of clear fluid presumably urinary in nature. The kidney was now found to be lying free inside its fibrous capsule (except at the hilum) and to move within it. Its surface presented the same appearance as that of a kidney stripped of its capsule upon the post-mortem table. To make sure that there was no disease in the interior of the organ it was opened along the convex border and a finger was passed into the pelvis. Everything was healthy so the wound in the renal substance was closed with fine silk sutures. The fibrous capsule was scarified on its inner aspect—i.e., the surface which should have been adherent to the renal parenchyma. It was freely opened along its posterior part, and by means of sutures which also included some portion of the kidney was fixed to the posterior abdominal muscles. The further course of the case was uneventful, the patient leaving in a month with the kidney firmly fixed and without any pain or inconvenience.

CASE 2. *Bilharzia hæmatobia affecting the kidney.*—This patient, a man from South Africa, had suffered for several years from pain in the kidney regions, with occasional attacks of renal colic. The pain affected both kidneys but the left side was always the more tender and was attacked first. There was no definite history of gravel, there was no family history suggestive of tubercle, but the patient stated that he had suffered from "bilharzia" for some nine years. The general health was good. He was a married man with a family and had always led an active life but was troubled by these attacks of colic which were becoming more frequent and which upset him for several days when they occurred. There was no frequency of micturition but there was always a noticeable quantity of blood in the urine during and after the attacks of pain. Examination of the kidney did not afford much information, nothing abnormal could be detected, and the testes were normal. The urine was carefully investigated by Dr. W. H. Willcox of St. Mary's Hospital who made the following report. The total quantity (12 hours) was 24 ounces. It was amber coloured, with a slightly alkaline reaction, of specific gravity 1020; albumin one-twentieth was present on boiling. The chemical test for blood was given faintly with the urine but markedly with the sediment; sugar and bile were absent. The amount of urea present was 2·05 per cent. The deposit gave the chemical test for pus and on examination under the microscope showed the ova of many bilharzia hæmatobia, also a large number of oxalate crystals, forming as it were casts of the renal tubules. Leucocytes and red blood

[1] Virchow's Archiv, 1885, Band cii., Heft 3, p. 28.
[2] Transactions of the Royal Medical and Chirurgical Society, vol. lxxxvi.

corpuscles could also be seen. The above report left the diagnosis very open, for although there were a large number of oxalate crystals it was not clear that the symptoms were dependent upon a calculus in the kidney. A skiagram was taken but this showed the renal regions clear without any suggestion of a calculous shadow. As the patient had previously been treated in South Africa for excess of uric acid he was put upon a rigid diet and advised to abstain from all oxalate-forming foods. May 2nd.—Ten grains of urotropin twice a day and alkaline mineral waters in large quantities were prescribed and massage was applied regularly to the loins. Under this treatment he improved in general health and put on flesh but on July 9th and 24th and August 23rd he had three definite attacks of renal colic, accompanied by vomiting and the passage of blood-stained urine. The attacks lasted from two to three days and morphine was administered owing to the severity of the pain. There was no frequency of micturition during or after the attacks nor was there any pain during the act. On August 26th he was again examined, three days after the last bout of colic, and the left kidney was found to be tender, while the muscles on the left side were held rigid. The urine was again analysed by Dr. Willcox who reported as follows. It was of specific gravity 1022 and its reaction was alkaline; there were albumin, blood, and pus as before. There were no casts and no oxalate crystals but some stellar phosphates and a few ova of the bilharzia hæmatobia. It appeared from this report that the urotropin had been effectual in diminishing the number of bilharzia ova, while the other measures adopted had abolished the oxaluria. As it appeared no longer probable that the symptoms were solely due to excessive excretion of oxalates, and as it was possible that the parasite had formed the nucleus of a calculus which was causing these attacks of pain, and as in addition the patient was exceedingly anxious that some further means should be adopted to prevent their recurrence before his return to South Africa, the kidney was explored on Sept. 8th by a lumbar incision. No calculus could be felt from the outside, so the pelvis was opened by an incision along the convex border of the organ. There was no calculus in the pelvis and a probe passed easily along the ureter into the bladder, but the whole of the interior of the pelvis and, as far as could be ascertained, of the ureter was filled with a soft friable growth, which felt like the pile of soft velvet covered by a layer of jelly. It was not a papilloma but apparently a granulomatous mass presumably caused by the bilharzia parasite. The exploration was followed by very free bleeding as the masses in the pelvis were exceedingly vascular. The renal wound was closed by interrupted sutures but a tube was inserted into the lower end of the renal incision so that some estimate might be formed of the function of that kidney. The case progressed favourably, blood and bilharzia ova were passed in large amounts per urethram for several days, when they gradually diminished and the blood finally disappeared. The tube was removed from the kidney after 48 hours, urine being excreted along it. This excretion was continued for three days, after which it ceased entirely, the wound healing by first intention. As the result of the discovery at the operation urotropin was again administered in the same amount as before, though no great hopes were held out as to its ultimate success. Since the patient was anxious that something should be done with the object of eliminating the tenacious parasite which was preying upon him I determined to inject a solution of perchloride of mercury, a treatment I had recently heard of as practised with remarkable success by Dr. Binet in Cairo. I received details from one of his patients, a medical student. The injection is made into the veins, with a solution of perchloride in normal saline, one milligramme to five minims of the saline. In this case the injections were first made into the subcutaneous tissues of the abdominal wall and in no instance was there any pain, swelling, or inconvenience; two punctures were made each day and at each one milligramme of the salt was injected. After a week of this treatment the needle was inserted into the vein of the forearm and the total daily allowance of the perchloride, two milligrammes, was discharged into the blood stream at one sitting. No ill-effects were noticed, but at the end of a month he was compelled to return to South Africa where he intends to continue the treatment for at least four weeks longer, since the total duration in Dr. Binet's hands was from six to eight weeks. Since the commencement of the mercurial treatment he had no recurrence of the renal pain and the ova of the bilharzia have almost disappeared from the urine. The following is the report made shortly before the patient sailed from England at the beginning of November: "Specific gravity 1018. Albumin a trace; amphoteric reaction; no blood; a very few bilharzia ova. In many films prepared from the sediment they were absent and it was only by careful searching that they could be detected, a marked contrast from the state of the urine on the first examination. A few oxalate crystals and a number of leucocytes."

I have thought it well to publish these cases as they seem to be both interesting and unusual. With regard to the first I can find no similar cases recorded in Mr. Henry Morris's exhaustive treatise on diseases of the kidney. The condition was, in my opinion, set up by the use of a silkworm-gut suture of considerable thickness which allowed of no yielding during the ordinary movements of respiration and so acted as an irritant to the kidney. I have no doubt that it was passed too deeply into the kidney substance but had I employed silk I do not think that the same result would have followed. As the urinary fistula closed in the loin the secretion which was no longer able to escape externally made its way along the suture to the space between the renal substance and the fibrous capsule which was gradually stripped off the organ by the accumulating fluid until the final state, one of false or external hydronephrosis, was produced.

The second case is equally interesting. In the first place, the symptoms were almost completely typical of renal calculus and the presence of the bilharzia ova in the urine did not negative this diagnosis since it was quite possible that they had formed the nucleus of a stone. Again, the condition is uncommon; no mention is made of a similar affection in Morris's book and other works on general and special surgery are silent on the subject. In the museum of St. Bartholomew's Hospital No. 2393c shows a like state of the ureters and kidneys from a fatal case which occurred at Alexandria. Although it is said that operations on patients who are extensively affected with this parasite are apt to be followed by a general outbreak of parasitic growths in the region of the incision no such complication was met with in my case, though possibly the thorough preliminary treatment with urinary antiseptics had considerable influence in checking it.

As far as treatment of the disease itself is concerned our text-books do not offer us much assistance or consolation. A number of drugs are mentioned, though no great faith in their efficacy is expressed, and we are told that the patient will in most cases outgrow or outlive his unwelcome guest. This is a hopeful view which may be justified in a large number of instances but when we meet with examples where it is evident that the parasite has a firm hold and is spreading to such an extent as to endanger the patient's life we are compelled to look around for more active measures. The results of mercurial treatment in the case previously mentioned encouraged me to hope for some benefit in the present instance and, so far as I can see in this instance, the method is exceedingly valuable and worthy of a more extended trial. I did not consider that any local treatment of the kidney, such as scraping the pelvis, was desirable as it would have been followed by very profuse hæmorrhage and hæmaturia and there was every reason to suppose that the opposite kidney was affected in a similar manner.

Spanish-place, W.

A CASE OF ANENCEPHALOUS MONSTER.

BY H. BEATTIE, M.R.C.S. ENG., L.R.C.P. LOND.

THE case described below, of which a photograph is reproduced, may prove of some interest. It occurred in a healthy primipara, aged 28 years, on March 14th, 1902. She has since given birth to twins, boy and girl, both healthy. The fœtus was born alive after seven hours' normal labour and proved to be a female of unusual size and weighing nine and a half pounds. She lived for 36 hours. The respiration was peculiarly jerky and hurried in character and no voluntary movement of the limbs was observed. There was a complete absence of the cranial vault and in its place was a soft nodular mass of apparently vascular connective tissue 10½ inches in circumference. The eyeballs appeared to be bulged forwards,

preventing the complete closure of the eyelids, with opacity of the lens. The mother stated that when two months pregnant she was frightened one day on going into her dimly lighted coal cellar by a large toad jumping out.

The chief clinical interest in the case was the difficulty of diagnosing the exact presentation until a late stage, the doughy feeling of the vascular mass taking the place of the cranial vault making the diagnosis very puzzling.

Necropsy.—On reflecting back the vascular covering it was found to be resting on the base of the skull, the bones composing which were thicker than natural, the mass consisting of connective tissue. There was no cerebrum but the medulla and the spinal cord in its upper part were adherent to the connective tissue. There was no trace of any optic nerves.

This case would appear to be an instance of that form of anencephalia described by Geoffrey St. Hilaire as real anencephalia. In D. Macalister's valuable translation of Ziegler's "Pathological Anatomy" he states that the arrest of development or agenesis of the cerebrum must take place at an early stage of the development of the fœtus. The maternal impression at two months, which I have quoted for what it is worth, might correspond with the time in which the intra-uterine changes causing the agenesis took place.

Banbury.

APPENDICITIS AND PREGNANCY:

NOTES OF A CASE WITH OPERATION AND RECOVERY.

BY H. A. LEDIARD, M.D. EDIN., F.R.C.S. ENG.,
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ABORTION or miscarriage—with the possible loss of two lives—constitutes the main barrier to operation and especially to abdominal section during pregnancy. Operation is at times imperative and many cases are on record in which ovarian and other tumours have been successfully removed without interfering with the normal course of pregnancy.

Judging from records appendicitis is not, so far as we have been able to trace, a common complication of pregnancy and the following case has been noted because of the somewhat unusual concurrence of appendicitis and pregnancy and because of its unusual and fortunate termination. In discussing the question of operation during pregnancy Jonathan Hutchinson, jun.,[1] records a case of a young woman who, in the ninth month of labour, was seized with true gangrenous appendicitis and diffuse peritonitis. After excision of the appendix and free drainage she recovered and bore a living child a month later. Kelly,[2] in discussing operation during pregnancy, mentions appendicitis as one of nine main conditions in which operation may be demanded. He refers to a case of appendicitis during pregnancy with consequent death quoted by Clement Godson in the discussion of H. Michie's paper.[3] He reports also in brief two cases in his own experience in which pregnant women were confined to bed with attacks of appendicitis. Both recovered and were delivered at term without surgical operation. The same author quotes a case, recorded by Mundé, of appendicitis during the last month of pregnancy. The patient on the sixth day was delivered of a dead child and six days later a localised appendical abscess was opened and drained successfully. McArthur's two cases are also referred to by Kelly. In the first of these gangrenous appendicitis was found in the fourth month of pregnancy. Abortion followed the operation with subsequent death from general peritonitis. In the second, which occurred during the fifth month of pregnancy, the abscess cavity was partially walled in by the uterus. Abortion followed operation, with death from general peritonitis.

These last three cases are included in a list of cases which appears in a monograph on the subject by Pinard.[4] This author tabulates and criticises 45 cases which he has collected chiefly from American and French sources. 30 of these cases were operated on. The results were as follows:—

	Maternal mortality.	Infantile mortality.
Cases operated upon, 30	10 = 33 %	11 = 36 %
Cases with *local* peritonitis, 22 ...	5 = 25 %	—
,, ,, *general* ,, 8 ...	5 = 62 %	—
Cases not operated upon, 15	2 = 13 %	2 = 13 %
Cases with general peritonitis, 1 ...	1 = 100 %	—

From a consideration of his own and other cases Pinard concluded that in such cases delay was dangerous, and he therefore advised immediate operation as soon as the diagnosis was assured, believing that by such means the best interests of both parent and child were secured.

The following are the notes of our case. The patient was 40 years of age and married. At the latter end of August, 1904, she was seized with pains in the lower right half of the abdomen, she being nearly six months pregnant at the time. The pain continued and was accompanied by constipation but without vomiting. Poulticing relieved the pain and after being in bed for four days she got up and did her routine work, which was rather more arduous than that of the ordinary housewife. On the sixth or seventh day pain again came on and she returned to bed with fever and constipation. The pain in the right iliac region was accompanied by swelling and tenderness. On Sept. 3rd she was visited in the country in consultation by one of us (H. A. L.) and was found to have acute tenderness in the appendix region with probable pus formation. On the succeeding day the patient was brought to Carlisle for operation, which was performed two hours after arrival as it was considered imprudent to wait longer. She was a thin, very spare, and very nervous woman who had borne eight children in nine years besides having had a miscarriage. Her mental perception and memory were not acute. She had a goitre of moderate size which had "descended" from her mother, one sister being similarly affected. She had had two attacks of "inflammation of the bowels," both occurring in the same part of the abdomen at two previous and separate pregnancies—she thinks "about the fifth month." Her temperature on admission was 99° F. and her pulse-rate was 80. Her tongue was dry and brown. The abdomen showed the fundus of the uterus at the umbilicus while between the umbilicus and the right anterior superior iliac spine there was some slight swelling.

The patient was anæsthetised with chloroform and the

[1] Manual of Operative Surgery, Treves, second edition, p. 7.
[2] Operative Gynecology, vol. ii., p. 403.
[3] British Gynæcological Journal, August, 1895, p. 169.
[4] Annales de Gynécologie, Mai, 1898.

incision through the parietes in the usual place allowed omentum to bulge forward into the wound. This omentum covered an abscess cavity containing about three ounces of pus (not foul). A gauze drain was inserted and the patient was put back to bed. The wound speedily became clean and granulating but gaped considerably, and stitches were from time to time inserted to try to close it. The plugging was removed on Sept. 6th. Pregnancy was obviously advancing further and the movements of the child were both seen and felt. This did not tend to the formation of a good scar. At the end of three weeks omentum began to protrude from the wound. This was ligatured and cut off and subsequently the wound began to close. A month after operation—namely, on Oct. 2nd—the patient was moved on to a couch for a short time and within 24 hours she miscarried in the sixth month of pregnancy, the child being dead. There were no complications and she was discharged at the end of a fortnight—namely, on Oct. 15th—wearing a bandage.

Throughout her illness the patient had a singularly rapid (counted) pulse. No other explanation than nervousness could be given, her carotid (visible) pulse being normal during conversation. Her temperature was almost uniformly subnormal, never rising above 99° except on Oct. 4th, 5th, and 9th.

In this case the diagnosis of suppurating appendicitis was fairly clear and operation was not delayed, since it was felt that unless removed the tendency of the pus was to track upward towards the liver in the path of least resistance. In view of the rapid growth of the uterus during the latter months of pregnancy the advisability of procuring miscarriage was discussed. For some days after operation the wound seemed to get more and more extensive and gaping and omentum was protruded. It was felt that when the wound *did* heal several unpleasant possibilities might present during labour. The scar, recent and thin, might rupture; a large ventral hernia in all probability would form either during labour, with possible intestinal constriction as a result, or afterwards, in which case a second operation would be necessary for its cure. The risk of procuring miscarriage was thought to be sufficiently great to counter-balance what were after all only reasonable possibilities or probabilities and nature finally and fortunately came to the rescue and solved all difficulties.

Carlisle.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF FRACTURE OF THE SURGICAL NECK OF THE HUMERUS IN AN OCTOGENARIAN.

BY PHILIP E. HILL, M.R.C.S. ENG.,
SURGEON TO THE CRICKHOWELL WORKHOUSE INFIRMARY.

A MAN, aged 80 years, was admitted into the Crickhowell workhouse infirmary on Oct. 20th, 1904, suffering from a fracture of the surgical neck of the right humerus. On examination the arm was found to be swollen considerably with ecchymosis extending from the shoulder to the wrist and the patient was in great pain. Some days prior to his admission he had been seen by a medical man who had placed a pad in the axilla and strapped the arm to the side. Coaptation having been effected a pyramidal pad with its base upwards was placed in the axilla and two splints were applied, an angular one to the inner side of the arm, and an outer one extending from the shoulder to the elbow. The arm and chest were then bandaged together and the hand and wrist were enveloped in a sling. The patient was placed on a water bed and necessarily kept there during the whole of the treatment. Unfortunately, at the end of six weeks he died from cardiac failure induced by the excessively low temperature which prevailed at the time.

I made a post-mortem examination of the limb in order to ascertain what amount of repair, if any, had taken place. I found that the fractured ends were accurately adjusted and that firm bony union had been accomplished, a result hardly anticipated in a man where the reparative processes are presumably deficient in consequence of the vital powers being exhausted by age and debility as evidenced by the fact that from the first there was incontinence of urine and fæces.

Crickhowell.

A CASE OF SURGICAL EMPHYSEMA IN PULMONARY TUBERCULOSIS.

BY R. D. ATTWOOD, M.R.C.S. ENG., L.R.C.P. LOND.,
ASSISTANT MEDICAL OFFICER, SOUTHWARK UNION INFIRMARY.

A MAN, aged 38 years, was admitted into the Southwark union infirmary in June, 1904, with extensive phthisis of the right lung. On Nov. 12th his face was noticed to be extremely swollen; on examination he was found to have surgical emphysema of the face and right side of the chest. The emphysema spread to the left side of the chest and abdominal wall. The patient died on Nov. 18th. At the post-mortem examination it was found that the larynx and trachea were normal. There was no pneumothorax. The right lung contained many areas of consolidation and several small cavities. Near the right apex was a small cavity over which the lung was adherent to the chest wall, and which communicated with the parietes by a small opening in the third intercostal space.

A CASE OF ENTERIC FEVER DUE TO EATING OYSTERS.

BY JOSEPH CLOUGH, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient was a boy, aged four years, who, about the middle of August, went for a two hours' sail at Scarborough. He was very sea-sick and vomited violently. On landing he ate two oysters from a street stall without any vinegar on them. Seven days afterwards he fell ill and 14 days afterwards he had distinct enteric fever spots. For the first three weeks of his illness he progressed favourably but at the end of the fourth week his abdomen became swollen and painful, and he suffered from vomiting, tendency to general coldness, and feeble circulation. During the first half of the fifth week he was sleepless and delirious, his temperature varied from 102·5° to 103·5° F., and there was diarrhœa, some motions being passed in bed involuntarily. I ordered him chicken broth with plasmon in it and castor oil in doses of about a teaspoonful, after which he immediately began to improve. His temperature did not become normal till the end of the seventh week of the illness. The boy is now as strong as ever.

Hunslet, Leeds.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

THREE CASES OF DISEASE OF THE APPENDIX CÆCI.

Under the care of Mr. H. S. PENDLEBURY.)

CASE 1. *Intussusception of the appendix; excision; recovery.*—A girl, aged seven years, was admitted into St. George's Hospital on June 20th of this year and the following history was obtained from the mother. The child had been in indifferent health since an attack of scarlet fever 12 months previously but had had no serious symptoms until eight weeks before admission, when paroxysmal attacks of abdominal pain commenced associated with rectal tenesmus; the pain was referred mostly to the umbilicus and to the right side. Vomiting occurred whenever the pain was severe, the last occasion being ten days before admission. The

bowels were at first much constipated, but later acted well with the aid of castor oil and enemata. Early in June blood and slime were noticed in the motions; this occurred on two consecutive days but had not been noticed since. The child was losing flesh rapidly, having formerly, according to the mother's description, been "nice and plump."

On admission the patient was found to be a very thin delicate-looking child. The pulse was 124 and the temperature was 98° F. The abdomen was greatly distended and coils of large and small intestine were seen in active peristalsis; the abdominal walls were quite flaccid and moved well with respiration; there was no tenderness and no swelling could be detected. Nothing abnormal was felt by the rectum; an enema resulted in a formed stool covered with blood and mucus.

Operation was performed by Mr. Pendlebury on the morning after admission. No abdominal or rectal tumour was felt under the anæsthetic. The abdomen was opened in the midline below the umbilicus and a swelling was at once found in the right iliac fossa; this was brought to the surface and proved to be an intussusception of the appendix into the cæcum; the tip of the appendix was just visible on the surface of the bowel. It was fixed in its new position by very firm adhesions and when attempts were made to reduce it the peritoneal coat of the cæcum began to tear.[1] The intussuscepted appendix and the surrounding portion of the cæcum were therefore excised and the opening into the bowel was closed with a continuous suture of fine silk. The patient recovered well from the operation; for two days she was fed by the rectum and was then given fluid food by the mouth. On the eighth day there was a sharp attack of abdominal pain and the temperature rose to 102°; these symptoms, however, passed off in 24 hours. A part of the wound broke down and was slow in healing, but in other respects convalescence was uneventful.

CASE 2. *Acute gangrenous appendicitis in a hernial sac in an infant aged 18 months; operation; recovery.*—A male child, aged 18 months, was admitted into St. George's Hospital on March 8th, 1904. The mother stated that the child had been born at the seventh month of pregnancy and had always been weakly and bronchitic; a hernia appeared shortly after birth and circumcision was performed with the result that the hernia had not been seen for a period of six months before admission; no truss had been worn. On March 4th the hernia reappeared; on the 5th the mother found that it was irreducible, larger, and very painful. Vomiting occurred twice on the following day and taxis applied by a medical man failed.

On admission the child was a wizened, feeble subject with moderate hydrocephalus, the circumference of the head being 18 inches. The pulse was 140 and the temperature was 101° F. The right inguinal canal and the right side of the scrotum were occupied by a tense, tender, irreducible swelling which was dull on percussion and without impulse on crying; there was great œdema of the penis and scrotum.

Operation was performed two hours after admission by Mr. Pendlebury. An incision was made through the œdematous tissues lying over the inguinal canal and a long tubular hernial sac was found and opened. Within the sac was some turbid fluid and there was a greatly swollen appendix two and a half inches long with patches of gangrene over its distal half; at its extremity were two perforations, its mesentery was greatly thickened, but the cæcum which was lying in the neck of the sac was absolutely normal. The testis was completely descended. Formal amputation of the appendix was then performed; the greater part of the hernial sac was excised and the radical cure completed by a modification of Bassini's method. The bronchitis which had existed previously became somewhat aggravated after the operation. Vomiting occurred once on the following day but apart from this convalescence was uneventful and the child was discharged on March 26th.

CASE 3. *Acute appendicitis; operation; onset of symptoms of portal pyæmia one month after operation on the day of intended discharge to convalescent home: death.*—A youth, aged 18 years, was admitted into St. George's Hospital on May 16th last during a first attack of appendicitis. Pain in the right iliac fossa had commenced on the 12th and vomiting occurred on the two following days; there had been absolute constipation except for a small motion after an enema.

On admission there were moderate tenderness and rigidity in the right iliac fossa. An indefinite swelling was felt in the region of the appendix. The pulse was 112 and the temperature was 100·8° F. The general condition was good.

The abdomen was opened three hours after admission by Mr. Pendlebury. A gangrenous appendix was found closely matted to the cæcum by dense adhesions. There was no actual perforation; a large stercolith was felt in its interior. The surface of the cæcum was œdematous and blotchy and around it was a small quantity of serous fluid with a strong fæcal smell; no pus was present. The appendix was separated with some little difficulty and amputated; the wound was then closed without drainage.

The patient recovered well from the operation, but on the sixth day the wound broke down and about five ounces of very foul pus escaped after removal of the stitches. Daily irrigation was then employed and the wound steadily closed, healing being complete on June 6th. It was decided to send the patient to the Convalescent Home on the 15th, but on the morning of this day a severe rigor occurred without apparent reason and was followed by bilious vomiting; the abdomen was perfectly soft and no abnormal physical signs were discoverable. During the following week jaundice developed and the liver became enlarged; the temperature, which had been normal since the day after operation, gradually became raised and then remained high and erratic; rigors occurred at intervals and were followed by vomiting. Antistreptococcic serum was injected without any apparent effect on the symptoms; the presence of portal pyæmia steadily became more obvious and death occurred on July 7th. At the necropsy most extensive septic thrombosis of the abdominal veins was found with suppurative pylephlebitis and splenic abscess.

[1] The specimen can be seen in the Pathological Museum of St. George's Hospital.

DERBYSHIRE ROYAL INFIRMARY.

A CASE OF SUBCORTICAL TUMOUR OF THE BRAIN REMOVED BY OPERATION.

(Under the care of Mr. R. H. LUCE.)

A MARRIED woman, aged 32 years, the wife of a non-commissioned officer serving in India, gave the following history. While stationed at Bareilly, Bengal, in January, 1903, she began to notice twitchings in the right arm but without loss of power. In March, 1903, while washing, she was seized with a sudden numbness in the right hand with inability to move the fingers. The twitchings continued from time to time, starting generally in the little finger, and gradually increased in distribution, sometimes reaching as high as the elbow, and by May the hand had become almost useless. On June 9th her second child was born in hospital and she returned about the 19th. A few days later she had a more severe convulsive attack involving the whole of the right side, including the face and the leg. This was followed by paralysis of the right hand but left the face and the leg unaffected. She was admitted to hospital and remained there until the beginning of October, when she was invalided home to England. While in hospital she had repeated convulsive attacks. In November, during the voyage home, there was another severe attack which left the right leg partly paralysed and from this time the speech was affected. After her return home she had four or five attacks, each followed by unconsciousness. She began to have great pain in the head, chiefly in the occipital region. She vomited at times and was very giddy when she tried to stand.

The patient came under the care of Mr. Luce early in December. She was then almost confined to her bed. She was partially paralysed in the right hand and right leg. Her speech was slow and laboured. Most of the words could be produced but took a long time to get out. The hand and forearm were practically useless but there was some power in the muscles of the upper arm and shoulder. There was slight external strabismus of the right eye but no definite paralysis of any of the muscles. There were atrophy of the right disc and neuritis of the left running on to atrophy. The sight was failing; she could not read and could only distinguish people with difficulty. There was nothing in the history obtained to indicate any particular kind of tumour. She was treated with large doses of mercury and iodide of potassium without any improvement except that there was less pain.

On Jan. 12th, 1904, she was admitted into the Derbyshire Royal Infirmary. She had two fits after admission and it became evident that her sight was rapidly getting worse. On the 23rd she was placed under chloroform after a preliminary injection of one-sixth of a grain of morphine. The whole head was shaved and the fissure of Rolando was marked out by punctures, through the scalp, on to the bone. A horse-shoe flap with a base of about four and a half inches was turned down off the bone and three holes were made with a medium-sized trephine about one and a half inches apart, one on either side of the fissure at its lower end and one above the other two, directly over the fissure. The bridges between the holes were chipped away with forceps and the centre was removed so that a triangular aperture was obtained with about two and a half inch sides. The brain pulsated but the dura mater bulged forcibly into the wound. A triangular flap of dura mater was turned up to one side. On feeling the surface of the cortex, which looked normal, a firm portion could be distinguished beneath the surface. The superficial cortex was scraped off with a finger and a firm mass was exposed about one-sixth of an inch below the surface. This was situated mostly in front of the fissure of Rolando, occupying the lower part of both ascending convolutions and the posterior part of the lower two frontal convolutions. A finger was inserted round the tumour and it was dug out. It seemed to come out intact. There was little hæmorrhage until the tumour was removed when there was very free oozing. The cavity was lightly packed with sterilised gauze and the flap was stitched round except at the spot where the gauze was extruding. No bone was replaced. There was a good deal of hæmorrhage for the first 12 hours and when it ceased and the plug was removed there was a large hæmatoma under the flap. The flap united by primary union. The patient recovered consciousness soon after the operation. She was aphasic except for very few words but was perfectly sensible. There was almost complete paralysis of the right leg with loss of sensation. The hand and arm were in much the same condition as before the operation. The tumour proved to be a nodular tuberculous mass weighing seven and three-quarter drachms. It had not broken down at any part. A section showed well-marked giant cells.

The patient's general condition improved rapidly after the operation. She had no more pain and no more convulsions. After a few days the right leg became hyperæsthetic and then gradually recovered normal sensation. By Feb. 20th she could move the leg to some extent. The thigh muscles had recovered more than those of the leg. There was also considerable improvement in movement of the right arm. The optic neuritis had almost cleared up and the sight had improved. She could make herself understood, though she spoke with difficulty and often could not produce her words. There were still swelling over the hole in the skull and no pulsation. She left the hospital on Feb. 29th.

The patient was seen and examined again on June 4th. She had been away for a change and reported herself as being in excellent health. She was quite free from headaches and had had no signs of convulsions. The hæmatoma had subsided, leaving a slight depression through which the brain could be felt to pulsate. She could walk across the room without assistance, though she dragged the right leg somewhat. There was not so much improvement in the hand and arm. The fingers remained flexed into the palm of the hand. There was only the slightest power of extension of the fingers and wrist but fair flexion. She could flex and extend the elbow though feebly. Her speech was almost completely recovered except that it was slow and scanning. The sight was greatly improved. She could read Snellen's distance types. The vision of the right eye was $\frac{6}{12}$ and that of the left eye was $\frac{6}{9}$. The patient was seen again on Nov. 22nd. She had been in excellent health since last examined. She could now walk several miles without fatigue though still slightly dragging the right leg. There had been but little further improvement in the sight or the condition of the right arm and hand. She had been absolutely free from fits or headache.

Remarks by Mr. LUCE.—This case seems interesting and worth recording from two points of view. First, because of the extremely classical character of the history and symptoms which made the diagnosis of tumour and its position easy; and, secondly, on account of the satisfactory result. The removal of tumours of the brain of which so much was expected at one time has not proved so satisfactory as was once hoped and the opportunity of meeting a completely removeable and non-malignant one is comparatively rare.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on Chloroform Anæsthesia.

A MEETING of this society was held on Dec. 13th, Sir R. DOUGLAS POWELL, Bart., the President, being in the chair.

Sir VICTOR HORSLEY, in opening the discussion, said that he had been interested in the administration of chloroform *per se* as he had been responsible for the appointment of the committee nominated by the British Medical Association. The whole question that evening turned upon the administration of the drug in known doses. He differed entirely from Dr. F. W. Hewitt who thought it sufficient to watch the effects of the drug and neglected entirely the dose which he was administering. He considered that this neglect of dose was the cause of death in some cases owing to an excessive dose being inadvertently given. He thought the liminal dose was about the same for all adults and that the view expressed by Dr. Hewitt that one patient required a drop when another required a drachm was an error. During the induction period a 2 per cent. of chloroform vapour was required. From his experience with the Vernon-Harcourt inhaler he was of opinion that 2 per cent. vapour was sufficient for the induction of anæsthesia both in man and animals. For the maintenance of anæsthesia, however, as soon as the skin incision had been made a percentage of 0·5 or 0·4 was sufficient. He referred to the use of Skinner's mask and thought that though perfectly safe in the hands of a skilled administrator, yet in the hands of less experienced persons it gave rise to a very irregular percentage in the quantity of chloroform administered. He did not believe that the intercurrent asphyxia alluded to by Dr. Hewitt could occur during the administration with a regulated chloroform inhaler but he had seen it occur with the open method and it was due to an overdose of the drug. He next dealt with the so-called vaso-motor effects of chloroform and denied that these occurred. He exhibited charts illustrating the fall of blood pressure and showed that this fall in blood pressure was proportional to the quantity of chloroform given. It had been stated by Dr. Hewitt that deaths occurred during light anæsthesia. He did not believe that such deaths occurred but that they were due to the high percentage of chloroform given inadvertently by the open method. He had but little doubt that some form of chloroform regulator would soon become almost universally adopted by the medical profession.

Lieutenant-Colonel E. LAWRIE, I.M.S. (retired), said that the dangers of chloroform anæsthesia were merely the dangers of a faulty method of administration and there was no danger in chloroform when it was properly given. He referred to the general results established by the experimental data of the Hyderabad Commission. The commission proved that diluted chloroform, provided it was not too dilute and the breathing of the animal was regular, gradually caused an accumulation of the anæsthetic in the blood sufficient to produce, first, unconsciousness, then narcosis, then cessation of the respiration, and finally death from failure and stoppage of the heart. A higher concentration could only bring about the same sequence of events in a shorter time and if the concentration was so excessive as to cause irregular respiration, holding of the breath, or struggling, the animal became more or less asphyxiated and gasped in irregular overdoses which might kill it with still greater rapidity. Clinically, it was an extraordinary fact that the excessive concentration which in certain cases led to such rapidly fatal overdosing in others conduced in a way which nothing else possibly could to the regular breathing which insured safety and it was then quite as safe in the induction stage of anæsthesia as the lowest concentration. Speaking generally, the essential factors in chloroform anæsthesia were diluted chloroform and regular respiration and it was the regularity of the breathing alone which

insured a regular dose of the anæsthetic and which maintained the regular action of the heart and of the circulation. He said that no form of inhaler could relieve the anæsthetist of any portion of his responsibility, but an apparatus introduced an element of danger into the administration which bore an exact proportion to the amount of skill and care required for its management.

Dr. P. M. CHAPMAN (Hereford) said that he had shown at the meeting of the British Medical Association at Oxford a Dubois apparatus but it had received but little attention. He considered that any apparatus was bad in which the patient furnished the motive power for the inspiration of the air over the chloroform. In the Dubois apparatus the chloroform was brought to the patient by propulsion. An exact percentage could be given by this method but it was difficult to get more than a 2 per cent. vapour unless special means were adopted. Other advantages of this apparatus were that the mask could be cleaned easily, the administration could be performed easily by one person, and it was not possible to increase the percentage of chloroform by turning the handle of the pump more rapidly as had been asserted. He asked if any deaths had been recorded during the use of the Vernon Harcourt apparatus.

Dr. DUDLEY W. BUXTON, in reply to this last question, said that he had never met with an instance of death during the administration of chloroform with the Vernon Harcourt apparatus and he had never seen any dangerous symptoms during such administration.

Mr. F. S. EVE said that the only apparatus of which he had experience was the Vernon Harcourt apparatus. He considered that it was cumbersome and could not be used for operations about the mouth and the head, and it also possessed the disadvantage of fatiguing the inspiratory muscles in prolonged operations. The administration of chloroform successfully depended rather on the individual than upon the apparatus. He objected to the nitrous oxide, ether, chloroform sequence, owing to the cyanosis which was produced by the administration of the nitrous oxide gas.

Mr. G. ROWELL said that he had used Dr. Levy's apparatus and was of opinion that in order to obtain the best effects it was necessary to increase the percentage to 3 per cent. of chloroform vapour during the induction stage, while 1 per cent. only was necessary for maintenance of anæsthesia. The rapid production of anæsthesia was the great advantage over the Vernon Harcourt apparatus. He did not, however, advocate the administration of chloroform by an apparatus. He thought that the individual variations were so great and the condition of the patient was influenced by the state of the higher centres together with the general nutrition and habits of the patients that it was impossible to adopt a standard dose for all. It was not possible to give so many units of chloroform for so many units of body-weight. He thought that the only secure method of administering chloroform was to observe all the symptoms as they arose and to note, first, the nature of the respirations; secondly, that too strong vapour was not given; and thirdly, the reflexes. Interference with respiration was the commonest cause of danger. He protested against the premature and futile attempt to reduce the administration of chloroform to a mere matter of weights and measures.

Dr. J. F. W. SILK cordially endorsed the views of Dr. Hewitt. He was further of opinion that comfort and safety in the administration of chloroform could best be improved by taking greater care in the education of the student who should have more opportunities of obtaining experience in the administration of anæsthetics before he left the hospital and that the routine use of pure chloroform was to be deprecated. As a substitute he suggested the more frequent employment of some mixture of chloroform and ether, which was certainly safer than pure chloroform, produced a type of anæsthesia hardly to be distinguished from it, and could be given in a very simple form of apparatus. Dr. Silk thought, too, that greater discrimination should be exercised in selecting competent administrators, and that in the interests of the patient it was not wise to accept without inquiry the first person who might offer himself for the task. He was not convinced that it would be of any great advantage to introduce any of the machines for giving chloroform that had been shown. He was of opinion that they were of necessity a great deal too complicated to hope to supplant simpler methods; that if they did not encourage they certainly did but little to discourage the view that successful administration depended upon the machine rather than upon the administrator; that the importance of a knowledge of the exact strength of the vapour given off by the machine had been very much over-estimated; and that as patients varied so much as to the way in which they responded to the drug he should continue to teach that it was essential to watch the varying moods of the patient and should discourage everything that might tend to divert the attention of the anæsthetist from that most important duty.

Dr. J. BLUMFELD said that he spoke from personal experience with the Vernon Harcourt apparatus, of which he had had a large experience, of the Dubois apparatus, of which he had had a moderate experience, and of the Levy apparatus, of which he had had a small experience. He thought that the Vernon Harcourt apparatus had the great disadvantages that it took a long time to induce anæsthesia, that the apparatus was very cumbersome, and that there was great difficulty in getting a satisfactory condition of relaxation in the patient. He did not think that any regulated inhaler would give greater safety in the administration of chloroform.

Mr. C. CARTER BRAINE said that he had tried the Vernon Harcourt inhaler in 15 cases; the great disadvantage which he had experienced was the slowness of inducing anæsthesia, but when once anæsthesia had been induced the apparatus acted well. In one case while the apparatus was in use the patient ceased to breathe and had symptoms of an overdose of chloroform but artificial respiration restored the patient. In another case the apparatus was jerked and the chloroform was thrown over the patient's face. In a third case the valves of the apparatus did not act properly. In eight of the 15 cases he had used it successfully, but in six cases he had to abandon the inhaler and only returned to it after anæsthesia had been induced. He had worked with Dr. Levy's inhaler with greater success because the percentage of chloroform could be varied.

Dr. H. J. SCHARLIEB said that the danger in chloroform administration was due to the fact that the drug if administered in too high a percentage excited the cardiac centre in the medulla and stopped the heart and secondarily the respiration. Exactly similar results could be obtained during chloroform anæsthesia by artificially stimulating the vagus. The administration of atropine ($\frac{1}{100}$th to $\frac{1}{75}$th of a grain) entirely prevented the stoppage of the heart and the above conditions, although the heart beats were rendered weaker and the blood pressure fell. The addition of alcohol to the chloroform in the proportion of 1 to 9 greatly diminished the tendency to produce inhibition and caused both the blood pressure and the respirations to be maintained even with high percentages of chloroform vapour in the air inspired.

Mr. H. BELLAMY GARDNER said that their teaching should be simplified as far as was possible, for the administration of anæsthetics was anxious work and plain dogmatic rules were of extreme value in cases of doubt and in emergencies. Much difference of opinion with regard to chloroform was due to a common error in the conception of the corneal reflex and to errors in the technique of eliciting it. During the administration of anæsthetics the anæsthetist's attention should be primarily devoted to maintaining efficient respiration and a free airway, because in the human subject the difficulties and dangers of anæsthesia were far more largely due to asphyxial factors intrinsic to the patient than to the action of the drugs used, the simple dosage of which could be readily learned in two or three lessons by the average man. This fact was not yet sufficiently recognised nor appreciated by workers in the laboratory who were not in the constant habit of handling the anæsthetised human being. In order to keep the airway clear all forms of stertor should be relieved directly they arose, whether buccal, nasal, glossal, tonsillar, palatal, epiglottic, mucous, laryngeal, or tracheal, whether they were purely mechanical or reflex, because if allowed to persist they tended to deepen and to introduce an unnecessary asphyxial factor into the narcosis. With regard to the actual dosage of chloroform the clinical evidence yielded by the degree of reflex response in the upper eyelid when the centre of the cornea was touched by the finger was the most valuable measure of the depth of narcosis, and if elicited in a proper manner it was not necessary or safe to abolish the same completely in both eyelids during any surgical operation under chloroform. During the persistence of a "weakly active" corneal reflex in, at any rate, one of the eyes impairment of respiratory activity from the action of chloroform upon the medullary centre was never observed, but central respiratory depression and

commencing failure of function often supervened directly the corneal reflex was entirely abolished. Expressed in another way—when the corneal reflex was entirely absent in the human subject a condition in which central respiratory failure was common had been established. With regard to the dosimetric apparatus which was shown at the last meeting, applying this doctrine he would ask only this question: Could the corneal reflexes be abolished in the human subject during their use? If they could, he maintained that a condition in which central respiratory failure was common could be produced and they were, therefore, no safer than any other method.

Dr. A. D. WALLER said that there were four points on which he would touch: (1) obstructed respiration producing the effects of asphyxia was due to the retention of the drug in the body; (2) the Skinner mask, excellent in the hands of the skilled anæsthetist but dangerous in the hands of the inexperienced; (3) the dosage of the drug. Dr. Hewitt thought that dosage was not desirable. He (Dr. Waller) considered that chloroform anæsthesia should be spoken of in terms of dosage; and (4) if dosage was desirable what apparatus should be used. He considered an apparatus on the "plenum" system was to be preferred to the apparatus on the vacuum system.

Dr. LEVY and Mr. EDGAR WILLETT then replied.

Dr. HEWITT said the phenomena of chloroform anæsthesia observed in the physiological laboratory differed from the phenomena observed in the operating theatre. The anæsthesia spoken of by Dr. Waller and Sir Victor Horsley differed from the anæsthesia which he was wont to observe. Sir Victor Horsley had referred to the "analgesic" state as all that was required but he was convinced that most surgeons would not be content with simple loss of pain. The anæsthetist had to produce a condition which was far beyond that required by Sir Victor Horsley, for in operations on the abdomen a complete relaxation of the muscles was required. He did not know how this could be effected with an apparatus which only produced analgesia. Referring to the deaths under light anæsthesia, he said that these were likely to occur in a certain class of patients—stout with narrowed air-passages—during the stage of excitement. The great question which had been discussed was whether a regulating inhaler should be used or not. He thought the evidence of the clinical worker was not at present sufficient to warrant the giving up of the simpler method.

MEDICAL SOCIETY OF LONDON.

Subphrenic Abscess and its Treatment.

A MEETING of this society was held on Dec. 12th, Mr. JOHN LANGTON, the President, being in the chair.

Dr. E. R. HUNT communicated a paper on Subphrenic Abscess, based on an analysis of 38 cases collected by him from the records of St. Mary's Hospital and elsewhere. Subphrenic abscesses might be primarily classified as left-sided and right-sided, according to the relation they bore to the falciform ligament of the liver. The most frequent cause was perforation of, or extension from, some portion of the alimentary canal. In one-half of the total number of cases the primary lesion was situated in the stomach—namely, in 19 out of the 38. The other probable causes were duodenal ulcer, three; hepatic abscess, four; appendicitis, three; perityphlitis, four; malignant disease of the stomach two; renal calculus, one; splenic abscess, one; and injury, one. Left-sided subphrenic abscesses were met with more frequently than right-sided, and in only one of the 19 cases consequent on gastric ulcer did right-sided abscess occur. The pus was situated between the left lobe of the liver, the diaphragm, and the spleen. Sometimes the pus was situated to the left of the spleen, between that organ and the diaphragm. Of this group there were seven examples, all due to perforation through the posterior wall of the stomach. More rarely the abscess might be in front of the stomach and liver, being bounded in front by the diaphragm and abdominal wall and behind by the left lobe of the liver and the stomach; of this group there were three examples. Right-sided subphrenic abscesses were nearly always situated between the liver and the diaphragm, their spreading left and right being prevented by the falciform ligament and the thoracic wall. They tended to extend downwards and backwards in a large number of instances, not infrequently reaching as far as the right kidney. Subphrenic abscess might occur in either sex and at any age. It was mostly chronic but the duration of the symptoms might vary from a few hours to several months and the patient's previous history was of extreme importance. The onset might be very acute, with severe pain, retching or vomiting, and rise of temperature, pulse-rate, and respiration, but in some cases the onset of symptoms was slow and insidious. Pain at the angle of the scapula was not infrequent. Pyrexia of a remittent type was the rule but in debilitated persons a large abscess might form beneath the diaphragm without any rise of temperature. There was no sign or symptom pathognomonic of subphrenic abscess. As a rule there was distinct diminution of respiratory movement in the upper part of the abdomen, a diminution which early extended to the lower part of the thorax on the affected side. The respirations were frequently irregular and catching. Percussion gave varying results according to the amount of air or gas and pus present. The outline of the dulness should help to distinguish subphrenic abscess from pleural effusion, dilated stomach, and enlargement of the liver. In the large majority of cases the symptoms and physical signs would be referable to the thorax. The earliest thoracic signs were some impairment of resonance with diminution of air entry at the extreme base of the lung on the affected side. Roentgen rays would frequently be found of extreme value in diagnosis, as by their means any loss of mobility of the diaphragm might be seen. Owing to the tenacious character of the pus in some instances the most careful use of the aspirator might fail to indicate the presence of an abscess.

Mr. CUTHBERT S. WALLACE read a paper on the Surgical Treatment of Subphrenic Abscess. He first drew attention to the unreliability of the aspirator in the detection of pus in this situation. The reason of this lay in the pus often forming a thick tenacious layer on the surface of the liver instead of a definite abscess. The most trustworthy signs were deficient respiratory murmur at the base of one lung, pyrexia, and progressive enfeeblement. He next pointed out that the subphrenic spaces became infected in two ways—by local extension and by gravitation. Fluid set free near the mid-line of the abdomen tended to pass to the lateral parts and thence to invade either the pelvis or the kidney pouches, the psoas muscle at the brim of the pelvis forming the watershed between the two areas. Subphrenic abscess was nearly always intraperitoneal, though in some cases arising from appendicitis the pus tracked up behind the colon. In opening the abscess there were four routes that could be adopted—(1) through the abdomen; (2) through the loin; (3) through the pleura; and (4) through the pleura and abdomen. The first method was only to be advised when the abscess was in the hypochondrium and not yet localised. The second was useful in the early stages of an abscess tracking up the colon. The third was the ideal method; the excision of the ninth rib on the right and the seventh on the left was thought to be the best. It was recommended that at least five inches of rib should be resected and that the periosteum enveloping the rib should be entirely removed since its retention was apt to be followed by the formation of new bone and the blocking of the opening. The fourth or combined method was advocated in those cases in which in consequence of the tenacious nature of the pus efficient drainage was impossible. The method consisted in carrying the incision for the resection of the rib into the abdomen. By this means the wound gaped and the upper surface of the liver was exposed in the wound. The cavity could then be packed with gauze, the frequent removal of which helped to get rid of the noxious products. Lastly, it was pointed out that the disease had still a very considerable mortality—probably 50 per cent.—and that there was a danger of reinfection of the peritoneum even after the localisation and drainage of the abscess. Appendicitis played the leading rôle in the causation of Mr. Wallace's cases and those which he had collected from the records at St. Thomas's Hospital.

Dr. F. DE HAVILLAND HALL remarked on the value of comparing the statistics of these cases. It was very difficult to ascertain the cause. During life the gastric ulcer, which was so common a precursor, was latent. It was only at necropsies that the ulcer was found. The diagnosis might be difficult and subphrenic abscess might be confounded with pleurisy, pneumonia, pericarditis, pyo-pneumothorax, and enteric fever (at an early stage). The x rays were undoubtedly a valuable aid in some cases, revealing deficient movement of the diaphragm on one side.

Dr. ALEXANDER MORISON remarked on the secondary

involvement of the thorax. It was this feature which was a most valuable one for diagnosis, the point being that the thoracic signs in such cases were wholly disproportionate to the gravity of the general condition of the patient, and it was this fact which was such a valuable aid to the diagnosis.

Dr. BERTRAND DAWSON had seen one case in which the possible cause of subphrenic abscess was enteric fever.

Dr. J. PORTER PARKINSON referred to the possibility of suppurating hydatid cysts resulting in subphrenic abscess and mentioned a case in illustration.

The PRESIDENT remarked that the tendency of the disease was towards death if unaided by surgery. Most of the cases which he had seen were related to appendicitis; other cases were related to disease within the liver. Operation should be performed as early as possible. The aspirator was of little use for diagnosis because of the thickness of the pus and for the same reason sinuses and chronic pyæmia, from which the patient might ultimately succumb, not infrequently resulted.

Dr. HUNT and Mr. WALLACE replied.

CLINICAL SOCIETY OF LONDON.

The Treatment of Intussusception.

A MEETING of this society was held on Dec. 9th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Mr. CUTHBERT S. WALLACE read a paper on the Treatment of Intussusception in Children, based on a series of cases of intussusception in children treated at St. Thomas's Hospital and the East London Hospital for Children between the years 1898 and 1904. There were 20 cases in all, the ages varying between three months and 33 months. There were 12 males and eight females. Of the 20 cases 19 involved both the small and the large guts; the remaining case was one of the colic variety. 11 were single tumours and nine were double. Mr. Wallace believed that double tumours were more common than was generally supposed and he referred to the difficulty of nomenclature that was encountered if a complete classification was attempted. The diagnosis was clinched by the finding of a tumour and if there was any doubt of the presence of a tumour an anæsthetic should be given and the matter settled at once. The treatment was primary cœliotomy, the most convenient incision being through the right rectus beside the umbilicus. Mr. Wallace did not lay any great stress on the reduction of the tumour within the abdomen but thought that time was the most important element in the treatment. The after-history of the cases seemed to show that as far as the ultimate result was concerned the method of suture of the abdominal wall was immaterial. The method favoured was by deep sutures through the whole thickness and buried sutures through the sheath of the rectus. By this method the danger of the incision coming open from failure of union was reduced as far as possible. Of the 20 cases four died, giving a case-mortality of 20 per cent. If the two cases of resection were excluded the case-mortality fell to 11·11 per cent. Mr. Wallace finally referred to the great fall in the case-mortality that had taken place of late years. Statistics drawn from the records of St. Thomas's Hospital showed that there was a marked increase in the number of cases of intussusception admitted to hospital.

Mr. C. H. FAGGE read a paper on the Treatment of Intussusception in Children by Laparotomy, founded on the results of 18 laparotomies, of which 17 were primary and one was undertaken after two attempts at reduction by inflation had failed. In 16 a tumour was discovered either per abdomen or per rectum. He drew attention to the variable position occupied by the tumour and insisted on the importance of routine rectal and bimanual examination, if necessary under an anæsthetic, as aids in coming to a prompt diagnosis. The time which elapsed before operation in his cases varied from five hours to three weeks; and though there was no direct relation between this and case of reducibility he pointed out that no case in which the duration was less than 48 hours had been irreducible. 11 were single and seven double intussusceptions of which at least 10 were ileo-cæcal and three colic-ileo-cæcal. He did not regard a minute division of intussusceptions into many varieties as of much clinical value. Probably eight of his cases would not have been, owing to their origin above the ileo-cæcal valve, in any way affected by inflation or irrigation. Reduction was by laparotomy, carried out with all possible speed through an incision usually in the right semilunar line and this was aided if necessary by an assistant's finger in the rectum which reduced the intussusception well into the descending colon. Five cases were irreducible and all of these were fatal; in one an artificial anus was formed and in all the others resection was performed and the ends of the bowel were united, in one by Maunsell's method and in the other three by simple end-to-end anastomosis with two rows of sutures, the inner passing through all the coats and the outer through the muscular and peritoneal coats. In another fatal case in which the invagination was reducible no surgeon had been called in for 24 hours and though reduction was easy the patient, a boy, nine years old, died on the fourth day. Of the 18 cases seven died, giving a mortality of 39 per cent.; of the reducible cases (13 in all) two died, a mortality of 15·4 per cent.; in the 14 cases under one year the mortality was 21·4 per cent., or, excluding the two which were irreducible, there was only one death, giving a mortality of 8·3 per cent. In all the fatal cases a considerable time had elapsed between the occurrence of the intussusception and the operation. A table of the cases was submitted.

Mr. A. E. J. BARKER remarked on the large number of double intussusceptions recorded in the papers. He had never seen a case of this nature, although he had operated on between 25 and 30 cases. He agreed with Mr. Fagge that escape of the bowel from the abdomen at the time of operation was a most undesirable complication. He differed from both Mr. Wallace and Mr. Fagge as to the length of incision necessary and it was rarely advisable, he thought, to make one over two inches long. He attributed the cases just described of bursting open of the wound to this factor, as he had never seen such an occurrence in his cases. In this connexion he believed it was important to conduct the first dressing under opium and chloroform. Some cases incurred toxæmia after the operation; it was probably explained by intestinal sepsis in and around the injury. He had several times noted a rise of temperature on the following day to 105° F., and even to 107°, there being no diarrhœa, distension, or other symptom. He had never seen recovery after resection in gangrenous cases and never expected to see it. The only hope lay in early operation.

Dr. C. R. BOX upheld the custom of admitting all acute abdominal cases first under a physician and advocated the administration of chloroform for diagnostic purposes. He discussed the diagnosis and mentioned a case of Riedel's lobe of the liver, thought to be of congenital origin, which gave rise to difficulty. In regard to treatment, inflation was a bad method; early operation was the best measure. He considered that the occasional bursting open of the wound resulted from non-union due to toxæmia and instanced the analogous cases of non-union after operation on perforated typhoid ulcers.

Mr. DOUGLAS DREW had operated on 13 cases. Two gangrenous cases died and one, who had a temperature of 106° F. on the following day, died from toxæmia. This case was one of double intussusception, the only one he had ever seen. He, like Mr. Barker, reduced within the abdomen but always withdrew the cæcum so as to examine it. He had never seen a wound burst open.

Mr. W. H. B. BROOK (Lincoln) asked whether inflation was ever justifiable. He had performed it with success. He also would like to know what treatment was recommended for the irreducible cases, whether splitting of the outer layer or resection.

Mr. W. G. SPENCER remarked on the possible causes of the toxæmia. It might arise from the intestinal lumen, from the strangulated vessels, or from the peritoneal cavity. Could anything be done for the condition, say, by stimulating peritoneal phagocytosis?

Mr. JAMES BERRY had seen 40 or 50 cases operated on. He had never heard of a successful resection under the age of two years and asked whether anyone else had. It was correct, therefore, to use force in persisting in the attempt to reduce difficult cases.

Mr. LAWRIE H. MCGAVIN asked how often the intussusception returned after reduction.

The PRESIDENT had met with several cases successfully treated by inflation and asked how far the statement that the intussusception returned was true.

Mr. WALLACE, in reply, said that he was convinced that the bursting open of wounds was not due to long incisions, as it occurred when these were only one inch long. He thought that inflation should never be done, as no one could ever tell

whether complete reduction had taken place; the disappearance of the tumour might only mean that the intussusception was tucked away behind a flexure or under the liver. He, like Mr. Berry, had never heard of a case of successful resection under the age of two years, so that forcible manipulation was the only thing to do.

Mr. FAGGE, in reply, thought that double intussusceptions were often missed but as laparotomy was always indicated their importance need not be insisted on. He had never made an incision under three inches long, even in a small child. He had only seen one case of recurrence after operation but many after inflation.

OBSTETRICAL SOCIETY OF LONDON.

Abdominal Gestation.—Supravaginal Hysterectomy versus Panhysterectomy for Fibroids.—Vaginal Drainage Tube.

A MEETING of this society was held on Dec. 7th, Sir WILLIAM JAPP SINCLAIR, Vice-President, being in the chair.

Lieutenant-Colonel A. J. STURMER, I.M.S., forwarded a short communication on a case of Abdominal Gestation which had been under his care in the Madras Government Maternity Hospital and the parts removed were shown. When the patient first came under observation the periods had ceased for five or six months. There was no sign of foetal life and the abdominal swelling seemed to decrease in size during the four weeks when she was under observation. At the operation a female foetus, weighing 2 pounds 6 ounces, was removed. Part of the placenta was separated without much difficulty from omentum and intestines but in attempting to separate the lower attachments free bleeding was caused. It was found that the fundus of the uterus had come away with the placenta and as the bleeding could not be otherwise controlled supravaginal hysterectomy was performed, both appendages being removed at the same time. The tubes appeared to be macroscopically intact and there was no history of any such occurrence as a rupture, but pending further investigation no opinion was offered as to whether the condition was primary or secondary.—Dr. C. J. CULLINGWORTH and Dr. AMAND J. M. ROUTH referred to cases which showed that the Fallopian tube might, by virtue of the remarkable properties of unstriped muscle, resume its normal dimensions and appearance very quickly after the escape of an ovum from within it.—On the motion of Dr. CULLINGWORTH the specimen was referred to the pathological committee.

Dr. WALTER W. H. TATE related three cases of Intestinal Obstruction following Operations for Fibroid Tumour of the Uterus, with special reference to the choice of operation. The first case was that of a single woman, aged 23 years, who had suffered from menorrhagia for 12 months, with gradual enlargement of the abdomen. The tumour reached to one inch above the umbilicus. Myomectomy was performed on May 6th, 1902. There was no trouble till two days after operation, when vomiting commenced. On the 9th the pain and vomiting became worse; there was no result from aperients. At 10 P.M. the abdomen was reopened and a knuckle of bowel was found adherent to the scar at the back of the uterus. The bowels were well opened on the next day, followed by uninterrupted recovery. The second case was that of a single woman, aged 46 years, with a history of menorrhagia for seven years, especially severe during the last 12 months. A solid tumour was discovered reaching halfway up to the umbilicus. On Dec. 18th supravaginal hysterectomy was performed. Good progress was made during the first week. On the eighth day after operation the temperature began to rise and the patient complained of pain. On the ninth day some distension appeared and aperients failed to act and sickness began. Sickness continued and the pulse-rate increased to 140, distension also increased, and on Dec. 28th the abdomen was reopened. Several coils of bowel were found adherent to the stump and some serous exudation was found tracking up towards the left lumbar region. Convalescence was protracted but ultimately a good recovery was made. The third case was that of a young married woman, aged 22 years, who was delivered of her first child on March 10th, 1904. There was some fever on the sixth day of the puerperium and a tender swelling was discovered in the hypogastrium. Three weeks later a second swelling was discovered in the right iliac region. The physical signs rather suggested dermoid disease of both ovaries. On April 14th supravaginal hysterectomy was performed. The patient got on well and her bowels acted well on the morning of the 17th. The same evening the patient had abdominal pain and began to vomit. The pulse-rate rapidly increased, she looked pinched and ill, vomiting continued, and aperients and enemata entirely failed. At 5 P.M. on the 18th the abdomen was reopened. A knuckle of bowel constricted by a band of omentum was found firmly adherent to the stump. The band of omentum was separated and ligatured. The bowels acted on the next day and the patient made a good recovery. Supravaginal hysterectomy had been the operation selected by Dr. Tate in nearly all cases of fibroids up to the last few months. The occurrence of three cases of obstruction in a series of 150 operations called for serious reflection. It appeared to Dr. Tate that dangerous adhesions of bowel were more likely to follow supravaginal hysterectomy than panhysterectomy. The immediate risk of the two operations in the large bulk of cases was equal, though in a few special cases the complete extirpation might expose the patient to greater risk at the time of operating. There was no advantage to be gained by leaving the cervix and in some cases the presence of the cervix might give rise to troublesome complications. The possible danger to the ureters was not an argument against the operation of panhysterectomy, as the risk of injuring them was to a great extent imaginary, and these structures ought not to be damaged when proper care was taken.—Mr. ALBAN DORAN considered that the flaps of the uterine stump should be closed by a continuous suture to avoid increase of the number of knots, the most unfavourable feature in supravaginal hysterectomy. An enema as well as purgatives should be given on the second day. In his own practice one case of obstruction, which he related, had occurred in 98 supravaginal hysterectomies. In respect to the danger of obstruction the Abel-Zweifel theory that a portion of the uterus above the os internum should be saved as well as the ovaries was of importance, as it seemed to lessen the risk of psychical disturbance. It involved, however, a large stump which increased the chances of intestinal obstruction. This uncertainty as to remote physiological effects was an objection to panhysterectomy. Besides, the sutured flaps of peritoneum deep in the pelvis might cause obstruction. Von Winckel recently related a case where a large vaginal hernia developed, so that the patient complained that she often sat on her bowels—an eminent instance of a bad intestinal complication.—Dr. PETER HORROCKS considered that panhysterectomy for fibroids was more difficult to perform, was followed by greater shock, had a higher mortality, and left the pelvic floor in a weaker state than supravaginal hysterectomy. He thought that of the three cases reported by Dr. Tate two should be left out of consideration on the ground that one being a case of myomectomy and the other being associated with subinvolution after delivery, adhesions were specially likely to occur and obstruction to ensue. One case of obstruction in 150 supravaginal operations was about the average and that was his own experience. He considered that a continuous suture was better than an interrupted one for the peritoneum covering the stump; in his own practice he used fine silk.—Dr. A. L. GALABIN did not consider Dr. Tate's contention proved by the evidence adduced. He thought that the method of doing the operation might make a difference. He made no flaps but cut across at the narrowest point, about the level of the internal os. If, however, fibroids involved the cervix so that he could not get below them he always chose panhysterectomy. He adopted rather an elaborate suture, but thought that it was worth the increased time occupied, as he had never had a case of intestinal obstruction after supravaginal hysterectomy, panhysterectomy, or vaginal hysterectomy. He first closed the broad ligaments by uniting their anterior and posterior faces with sutures at the site of the round ligaments and the uterine arteries. He then united the peritoneum in a transverse line, getting a sero-fibrous union by piercing the anterior peritoneum twice and using a continuous suture of fine silk. The stump was dealt with by stitching the edge of the peritoneum left above the bladder in stripping it down and was mainly covered by bladder and could come in contact with intestines only at its posterior edge. In panhysterectomy he united the peritoneum in precisely the same way. Similarly, in vaginal hysterectomy he preferred to-

stitch the peritoneum so as to fix the pedicles of the broad ligament in the vagina. In two cases in which he had had occasion to reopen the abdomen within two or three years after supravaginal hysterectomy the line of suture was observed to be free and smooth and no trace of the silk was discoverable.—Dr. HERBERT R. SPENCER said that he had relinquished the operation of supravaginal hysterectomy in favour of total hysterectomy for over five years. He had called attention two and a half years ago to the subject of intestinal obstruction after supravaginal operations and had published a case of his own. On several occasions during the last ten years he had referred to the risk of septic peritonitis from infection of the cervical stitches long after the operation. Moreover, not uncommonly cases were met with in which pus was discharged per vaginam after the operation. Hæmorrhage from, and the development of malignant disease in, the stump were other possible disadvantages. The lists of picked cases published produced a false impression of the advantages of supravaginal hysterectomy. The cases required following up and the later results recording before a correct estimate could be reached. Prolapse after total removal he regarded as a bogey and not more likely to occur when done for fibroids than after a similar operation for cancer. Personally, he had never seen a case. For uniting the peritoneum he preferred a purse-string suture. He adopted the practice of leaving salt solution in the abdomen—he thought that it tended to prevent the occurrence of adhesions.—Mr. BOYD questioned whether Dr. Tate's second case should be regarded as a case of typical mechanical obstruction and thought it rather a condition of peritonitis with secondary matting of bowel.—Dr. CULLINGWORTH stated that he had performed Baer's operation very nearly 100 times and had had four undoubted cases of genuine intestinal obstruction, but in no case was it noted that the intestine had become adherent to the line of suture on the uterine stump. In regard to the relative merits of supravaginal hysterectomy and so called panhysterectomy he had an open mind. He had had little, if any, personal experience of panhysterectomy, so that he had no means of comparing the one with the other in his own practice. But so far as the mortality statistics put forth by C. P. Noble and by Olshausen showed, total extirpation was attended with a higher mortality and most operators were agreed that total extirpation involved a longer operation. He could not subscribe to Dr. Tate's opinion that the simple transverse wound left after the operation at the bottom of the pelvis afforded little or no risk of dangerous intestinal adhesion, for he had known it to occur with fatal results in two cases after vaginal hysterectomy for cancer. He thought that Dr. Tate was relinquishing the supravaginal for total hysterectomy on very slender grounds if his conversion really rested on the evidence brought forward in his paper.—Dr. A. H. N. LEWERS had met with two cases only of intestinal obstruction after abdominal section. In both cases supravaginal hysterectomy had been performed. In one of these cases a coil of small intestine had become adherent to the scar over the stump across the floor of the pelvis. In the other obstruction was due to a coil of intestine slipping through a hole in the omentum. Dr. Lewers had never had any trouble after supravaginal hysterectomy due to suppuration in the neighbourhood of the stump. He had performed a moderate number of panhysterectomies for fibroids but the operation took longer than, and to his mind presented no advantage over, the supravaginal operation.—Dr. TATE replied.

Sir WILLIAM SINCLAIR showed a Glass Vaginal Drainage Tube which he had devised to obviate the difficulty usually arising from the omentum being drawn into and plugging the openings. It was furnished with a number of very small holes and was so shaped as to be self-retaining.—Dr. LEWERS and Dr. GALABIN were both satisfied with the results obtained by employing a strip of gauze in those rare cases where it became advisable to drain into the vagina by opening the pouch of Douglas.

OPHTHALMOLOGICAL SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held on Dec. 8th, Mr. JOHN TWEEDY, the President, being in the chair.

The following were among the demonstrations given:—

Mr. E. HARRIES JONES showed a patient whom he had had under treatment since June 1st, 1904, whose vision in the right eye was then $\frac{6}{9}$. Proptosis developed and in August the vision was barely $\frac{1}{18}$. The orbit was explored and a soft rounded mass was felt in the region of the optic nerve. On Nov. 12th the vision was $\frac{6}{12}$, but by Dec. 8th it had improved to $\frac{6}{9}$. Potassium iodide was given till Oct. 1st and the fields had always been full. In September there was some slight exudation on the papilla, with striate hæmorrhages at the edge of the disc, all of which became absorbed. There was no history of venereal disease.

Mr. G. WINFIELD ROLL showed a male infant, aged 14 months, with marked Proptosis of each Eye without pulsation. There was lateral nystagmus and the child was apparently blind. The discs were atrophied but the vessels were about normal in size; in the right eye were patches of choroiditis. The child was mentally deficient but could sit up unaided. The testicles were undescended. There was abundant mucous discharge from the nares, but otherwise he appeared to be healthy. The family history was not obtainable.

Mr. C. DEVEREUX MARSHALL showed a well-marked case of Posterior Lenticonus in a woman, aged 23 years. The vision in this eye was $\frac{6}{60}$ and in the other eye it was $\frac{6}{9}$.

Mr. G. W. THOMPSON and Mr. EDGAR CHATTERTON showed some sections of a Cyst of Krause's Gland. The patient from whom it was removed was 25 years of age and when 13 years of age had her lid cut accidentally; the mass had been growing since then and had reached the size of a small pigeon's egg.

Mr. GEORGE COATS showed two sisters exhibiting similar Abnormalities in the Branching of the Retinal Vessels. A third sister had minor peculiarities.

Mr. LESLIE J. PATON showed a patient suffering from Endothelioma of the Orbit, sections of which had been shown at the last meeting of the society. The patient, a female, aged 38 years, was first seen in May last, when there was slight lateral proptosis of the right eye; her vision was $\frac{6}{9}$ and the fundus was normal. Mercury and iodide produced no effect. An attempt was made to remove the growth without the eyeball, and this was done on Sept. 20th, but it was found to extend to the posterior angle of the orbit. Its speedy recurrence, as well as its microscopical appearance, showed it to be an endothelioma. Mr. Paton also showed another patient upon whom he had operated for Symblepharon. The mucous membranes of three frogs' mouths were used to cover a large area in the lower conjunctival cul-de-sac. The condition was produced by orbital cellulitis. During the year that had elapsed since the operation there had been practically no shrinking.

Mr. A. STANFORD MORTON exhibited a man, aged 28 years, who had suffered from Recurrent Hæmorrhages into the Vitreous, since which new vessels had developed in the vitreous.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Toilet of the Anus.—Varying Form of the Stomach.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 7th, Professor JOHN CHIENE, the President, being in the chair.

Mr. A. G. MILLER read a communication entitled "The Toilet of the Anus." He drew attention first to the risk of carrying infection to the various parts of the body by the hands and clothes from an insufficiently cleansed anus. He then described a simple method of cleansing the anus. He pointed out that any method of cleansing caused contamination of the hands and that, therefore, careful and thorough cleansing of the hands and especially of the nails was necessary also. Mr. Miller drew attention to one or two affections probably due to want of proper cleanliness, as pruritus ani, abscess, fissure, and piles. In regard to the last he advocated the use of injections of a few ounces of cold water as well as washing after defecation as an excellent prophylactic.—Dr. W. ALLAN JAMIESON said that he was in the habit of advising patients to carry with them a box containing a sponge for the purpose of washing the anus. He had found that patients obtained marked benefit

in pruritus ani from the injection into the rectum each night of a wineglassful of warm thin starch to which had been added two drachms of liquor bismuthi. This was retained during the night and was markedly soothing in effect.—Dr. J. O. AFFLECK referred to the fact that nurses were not in the habit of cleansing the anus of patients thoroughly and said that this was especially important in cases of typhoid fever or cholera.—Dr. W. TAYLOR described a douching apparatus which could be easily fixed to the water-closet.—Dr. H. M. CHURCH referred to the necessity of thoroughly cleansing the nozzle of the enema syringe.

Professor D. J. CUNNINGHAM gave a description of the Varying Form of the Stomach and illustrated it with a number of beautiful lantern slides. He discussed, confirmed, and to some extent supplemented the recent observations of the late Professor His on the form of the stomach. He next proceeded to describe certain physiological conditions of the stomach which were now not infrequently seen in formalin-hardened subjects and he endeavoured to show that these apparently temporary forms in some measure coincided with Mr. Cannon's observations on the movements of the stomach in the cat when studied by the aid of the x rays. Professor Cunningham next touched upon the question of hour-glass contraction of the stomach and supported the views of Mr. B. G. A. Moynihan on this subject.—The paper received a lengthy discussion which was taken part in by Dr. W. G. BLACK, Mr. H. J. STILES, Mr. H. ALEXIS THOMSON, Dr. H. HARVEY LITTLEJOHN, Mr. F. M. CAIRD, Dr. JAMES RITCHIE, Dr. AFFLECK, Professor W. S. GREENFIELD, Dr. GEORGE HUNTER, Dr. D. WATERSTON, Dr. HARRY RAINY, and Dr. G. LOVELL GULLAND. The general opinion seemed to be that the appearances found in the dissecting room did not at all coincide with the condition of the stomach during life.—A cordial vote of thanks was awarded to Professor Cunningham for his interesting demonstration.

Dr. T. M. BURN-MURDOCH and Dr. STUART MACDONALD showed a specimen of Biliary Cirrhosis from a young child.

Mr. A. A. SCOT SKIRVING exhibited (1) a Simple Form of Coin-catcher; (2) old Stereoscopic Photographs of cases operated upon by Professor James Syme, Professor James Spence, and others; and (3) a specimen of Congenital Syphilitic Disease of the Knee-joint.

Mr. A. MILES exhibited (1) a Kidney removed for Pyonephrosis due to a Calculus impacted in the Pelvis; (2) a Kidney removed for Hydronephrosis due to a Calculus impacted at the Lower End of the Ureter; (3) Kidneys removed for Tuberculous Disease; and (4) Renal Calculus removed from the Calyx of the Kidney.

Mr. CAIRD demonstrated a Luys Urine Separator with examples of urine obtained from each kidney.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Yellow Atrophy of the Liver.—Glioma of the Retina.—Myelæmia.

A MEETING of this section was held on Nov. 25th, Dr. H. C. EARL, the President, being in the chair.

Dr. W. J. THOMPSON described a case of Acute Yellow Atrophy of the Liver. He said that the patient was admitted to Jervis-street Hospital, Dublin, on August 24th, 1904, a few weeks after her confinement. She had been suffering from jaundice for one week. She was 27 years of age, had been married six years, and had three children; her family and personal histories were good; she lived a hard life and resided in a tenement house in a congested part of the city. On admission the case seemed to be an ordinary catarrhal one; there were no enlargements of the liver, all the organs were normal, and the urine contained a slight trace of albumin. She seemed to improve during the first week but became worse in the second week. Nausea was almost constant and there were severe spasmodic pains in the liver. During the third week the liver dulness greatly diminished. Leucin and tyrosin were detected in the urine and at the same time the urea was diminished. At the end of the third week severe nervous and cerebral symptoms developed and she died three days afterwards, four and a half weeks after the first sign of jaundice. At the post-mortem examination the liver was found to be small and soft and only weighed 29 ounces. All the abdominal organs were in a healthy condition, save for a small ovarian cyst. The clinical points of interest were (1) the protracted duration of the attack—namely, four and a half weeks; (2) the spasmodic agonising pains in the liver; and (3) the absence of hæmorrhagic manifestations.—Professor E. J. MCWEENEY then described the character of the specimen as follows. The liver weighed 29 ounces; it was small, very soft, and pulpy; the capsule was wrinkled and pale red with yellowish mottlings. A section, which was mostly reddish with bright yellow patches, showed that the lobular marking was obliterated. The dimensions of the right lobe were six inches from side to side, five and a half inches from before backwards, and one and five-eighths inches in thickness. The left lobe was at most only half an inch thick. The gall-bladder was normal. The microscopic examination was made by means of teased preparations, frozen, and paraffin sections. It showed (1) complete necrosis of the liver cells; (2) patches of round-cell infiltration, which still preserved their nuclear staining; (3) patchy pigmentation of the liver cells with yellow granular matter which did not give an iron reaction (bile); (4) moderate fatty degeneration; and (5) the presence of minute, yellowish-brown globular concretions in groups and rows. These were very abundant in the tissue and varied from 12 μ to 30 μ in diameter. Some of them seemed radially cleft, others were coated with a prickly layer of minute needle-shaped crystals, whilst others presented obscure concentric striation. There were also minute colourless acicular crystals lying singly and in sheaves. These objects were doubtless crystals of leucin and tyrosin. The globules were soluble in alkalies and weak sulphuric acid; insoluble in ether, alcohol, and chloroform; and partly soluble in water. A few bacilli were present but were mere ordinary putrefactive germs. The generally accepted theory was that the disease was due to toxins.

Mr. J. B. STORY, the PRESIDENT, and Mr. H. C. MOONEY exhibited specimens of Glioma of the Retina.

Professor MCWEENEY described hæmatological observations which he had made on a case of Myelæmia. The patient was a man, aged 41 years, who had been an inmate of Mullingar District Asylum for the past six years, suffering from paranoia with hallucinations and delusions. After four years of good bodily health he began to lose weight and became unable to work. A large abdominal tumour was then discovered and was recognised to be the hugely enlarged spleen. Blood counts yielded 2,680,000 red corpuscles and 450,000 white corpuscles per cubic millimetre respectively. Despite rest in bed, good food, and plenty of fresh air he became steadily weaker. There was slight fever. Anæmic symptoms were never prominent, and hæmorrhages did not supervene till a few days before death, when he suffered from epistaxis and hæmorrhagic effusion into the subcutaneous tissue of the right thorax. The duration of the case from the discovery of the splenic tumour was 14 months. The necropsy revealed an enormous enlargement of the spleen, which weighed 145 ounces, was firm, dark red and homogeneous on section, and presented no hæmorrhages, infarcts, or whitish infiltrations. The marrow of the long bones was pink, fleshy, vascular, and completely altered from its normal fatty state. The superficial lymph glands were not enlarged. Of the internal ones the bronchial, omental, mesenteric, and coeliac glands were slightly enlarged. There was slight obsolete tubercle in the apices of both lungs. The liver weighed 138 ounces but showed no macroscopic change beyond slight nutmeg discoloration and marked hyperæmia. There was no leukæmic infiltration in any of the organs. Blood films taken shortly before death showed: polymorphic cells, 35 per cent.; myelocytes, 45 per cent.; transitional forms, 3·5 per cent.; small lymphocytes, 2 per cent.; and eosinophiles, 14·5 per cent. A certain number of mast cells were seen and polymorphic cells with mitotic nuclei were readily found in the peripheral blood. Marrow films revealed giant cells, myelocytes, eosinophiles, large and small hyaline mononuclear cells, and normoblasts in varying proportions.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Mr. C. D. Fitch, the President, being in the chair.—Mr. J. Lionel Stretton showed several cases and specimens, amongst which were the following. 1. A woman, aged 30 years, from whom he had removed a Malignant Stricture of the Sigmoid Flexure. The portion of intestine removed was about five inches long; the junction was made by simple suture. She made

a perfect recovery and was discharged in three weeks; she now suffered no discomfort. 2. A Cæcum and Appendix with about one foot of Ileum removed from a woman, aged 51 years. There had evidently been an intussusception some years previously and the portion of intestine involved had become malignant. The calibre of the gut was not more than one-eighth of an inch. The junction was made with catgut sutures. 3. A woman, aged 75 years, whom he had operated on for Double Cataract at one sitting with satisfactory result. Mr. Stretton said that he had had 15 cases of Appendicitis under his care within two months and four on one day; of these cases 12 had been operated on and three patients had refused operation. All those operated on recovered, though one seemed hopeless and one of the others was exceedingly ill. The worst case was that of a boy, aged ten years, who was admitted with general peritonitis. He had suffered from previous attacks. The present one had lasted one week. The abdomen was swollen, hard, and tympanitic. The patient was very ill; there were constant vomiting and a running pulse. An incision was made in the mid-line. Half a pint of fœtid pus was evacuated and a fæcal concretion. The discharge continued for a week and then became fæcal. There was very little action per anum. This continued for three weeks and then gradually subsided and the wound healed. The patient had now put on flesh and appeared to be quite well. Another boy, aged ten years, was admitted with peritonitis following an attack of two days' duration. The patient was very ill; there was constant vomiting and his pulse was 120. An incision was made in the usual situation; a quantity of thin sero-pus escaped. The appendix presented and was easily removed; a gauze drain was inserted and the wound was closed. Ten days later he became suddenly worse, with vomiting and a distended abdomen. The track of the gauze drain which had been removed three days after operation, showing no discharge, had healed. This was reopened with sinus forceps and about half a pint of pus was evacuated, since when the patient had gone on uninterruptedly well. Four more cases had special points of interest. The first was that of a man, aged 58 years, who was admitted with a history of 14 days' constipation following sudden pain in the right iliac region, where a globular mass, of about the size of a cricket ball, could be felt. Symptoms did not indicate appendical trouble but an exploratory incision disclosed a large abscess behind the cæcum; the discharge became fæcal in two days and had now nearly ceased. The second case was that of a boy, aged seven years, who was admitted with a history of an attack of appendicitis during the previous week. The appendix was found to be curled up with the tip adherent near the base; about half an inch from the tip it was closely adherent to the omentum and on separating this a small abscess was discovered containing half a drachm of pus connected with the interior of the appendix through a slough opening. The appendix was removed and the patient made uninterrupted progress, there being no rise of temperature. A fortnight later a lump appeared below the right costal margin which proved to be a large subphrenic abscess. The third case was that of a man, aged 35 years. He had had two attacks, the last occurring about a week previously. He had fully recovered and was able to walk from the station to the hospital, a distance of about one and half miles. The temperature was subnormal. There were no symptoms, yet on operating an abscess was opened containing an ounce of pus and the appendix was so rotten that it tore in two. The fourth case was that of a woman, aged 38 years, who had, in addition to appendicitis, 79 gall-stones. Both conditions were diagnosed before, and both were removed at the time of operation.—Mr. Stretton also showed: A Phosphatic Vesical Calculus weighing 222 grains, a Prostate Gland weighing three ounces, together with a small Mulberry Calculus removed from a man, aged 73 years; 45 Gall-stones removed from a woman, aged 67 years; 75 Gall-stones removed from a woman, aged 38 years; and a large Gall-stone, weighing 145 grains, removed from a woman, aged 54 years.—Dr. Evans showed a boy, aged six months, on whom he had operated for radical cure of Umbilical Hernia with satisfactory result.—Dr. B. Addenbrooke showed a Uterus containing a Sloughing Fibroid which he had removed through the abdomen. The patient had had backache and offensive discharge for five years. She was making a good recovery from the operation.

BRITISH GYNÆCOLOGICAL SOCIETY.—At a meeting of this society held on Dec. 8th, Professor J. W. Taylor, the President, being in the chair, Dr. H. Macnaughton-Jones showed an Alveolar Carcinoma of the Fallopian Tube and alluded to the 53 cases recently tabulated by Mr. Alban Doran, most of which were papillomatous, the uterus being affected in six only. Neither the uterus nor the ovary was involved in the present case.—The President showed two Fallopian Tubes removed at a Third Cæsarean Section after being ligatured twice in previous operations. He also showed three specimens of Cancer of the Body of the Uterus: the first a simple one, the second complicated by a large ovarian tumour apparently malignant, and the third a malignant adenoma invading a myomatous uterus. The inadequacy of ligature to prevent conception was, he said, now fully recognised. The better way was to remove the tubes with their insertions into the uterus by wedge-shaped incisions in the cornua. He also showed an enormous Ovarian Abscess which had extended up to the umbilicus and had been tapped by the vagina three months previously by another consultant. It was firmly adherent to the pouch of Douglas at the seat of the puncture. Vaginal drainage was resorted to and a good recovery ensued. The pus gave a pure culture of the bacillus coli, but no adhesion or channel of communication with the bowel could be detected at the operation.—Dr. William Alexander read a paper on Adenoma of the Endometrium, illustrated by microscopical sections, photographs, and lantern slides. He reported five cases in which, with good results to the patients, the uterus was removed on account of recurrent hæmorrhage resisting all forms of treatment, including repeated curettings and, though not profuse enough to be absolutely fatal, leading to extreme anæmia and invalidism. The uterus was practically unchanged in size and shape and, except for some increase in glandular tissue, the curettings had no pathological features. The uterine cavity, however, in all cases presented a very definite and uniform appearance, a thick, semi-gelatinous, semi-fibrous membrane running into folds or polypoid masses, affecting the whole of the mucous membrane of the cavity and of the uterine end of the Fallopian tube; it was described by Dr. F. Griffith, of the Thompson-Yates laboratory, as adenoma of the endometrium.—Dr. Macnaughton-Jones reminded the society that he had exhibited two cases of glandular hyperplastic endometritis in which the adenomatous change described by Dr. Alexander had been present.—Mr. F. Bowreman Jessett said that he had seen similar cases and was certain that the gelatinous alteration in the mucosa was a precancerous condition which, in time, would develop into malignant disease. It was seldom that hysterectomy was justifiable when the scrapings of the curette did not show malignancy, but he had known cases pronounced to be benign on such evidence afterwards prove to be malignant.—Dr. C. H. F. Routh condemned the removal of the uterus except for the ascertained presence of malignant disease. He had invariably been able to control metrorrhagia by the intra-uterine use of caustic or a red-hot iron.—Dr. Heywood Smith said that it was only when such treatment failed that hysterectomy should be considered.—The President questioned whether a woman was in a much better condition after the introduction of a red-hot iron into her womb than after hysterectomy. The late Mr. Lawson Tait, however, had used the actual cautery extensively and with good results.—Dr. Alexander, in reply, said that in his experience the disease was not malignant. In one patient after 18 years there was apparently no more growth than at first; another, after 20 years of hæmorrhage was still alive waiting for the menopause, and hardly worse than many years ago. Hysterectomy was not performed till other means had been fairly tried and had failed, and the removal of a uterus that was not only useless but a source of weakness need not nowadays be termed heroic; it was in these cases a simple and safe operation for a very grave disease. He always removed the uterus by the vagina and left the ovaries.—Dr. R. T. Smith showed a Tubal Sac containing a Fœtus with its head towards the uterus which in its structural completeness was a remarkably interesting specimen of ectopic gestation, the more so as the diagnosis had depended almost entirely on the physical signs, the patient, a Polish woman, knowing but little English.—Dr. Bedford Fenwick showed a Degenerated Fibroid Tumour which was referred for a pathological report.

THERAPEUTICAL SOCIETY.—A meeting of this society was held on Nov. 22nd, Sir Lauder Brunton presiding.—The Secretary read a paper by Dr. J. Gordon Sharp of Leeds on Strychnos Toxifera and other Paralysers of Motor

Nerve Endings. Dr. Sharp, who was unable to attend, stated that many had endeavoured in vain to discover the plant that produced curare till in 1902 Mr. J. Quelch brought to Dr. Sharp some poisoned arrows and specimens of the plant given to him by an Indian chief of Guiana. The plant was proved by Mr. E. Holmes to be strychnos toxifera and curarine was found in the bark but not in the leaves. This alkaloid was very deliquescent and easily decomposed but its salts were more stable. Commercial curare contained from 9 to 11 per cent. of the alkaloid. Curare had been used in chorea, in convulsions, and for the prevention of painful spasms in moving wounded persons. He compared its action with that of strychnine, delphocurarine, alstonine, aconite, snake poison, and diphtheria toxin.—The President said that the paper reminded him of that by Majendie on the Upas tree which was strychnos nux vomica. He thought that alstonine might be useful in cases of excessive itching in diabetes and albuminuria.—Dr. Crichton remarked that death from curare in frogs occurred only after 40 hours, while strychnine killed them in two hours.—Mr. G. C. Moor, F.I.C., then read notes on Brandy, showing that the different constituents of brandy could be accurately estimated by chemical analysis, but it was quite possible to prepare a brandy which would answer every analytical standard. Therefore, factories of brandy should be properly inspected by Government as occurred with the Orion brandy of Australia.—The President said that some wines promoted merriment while others caused quarrelsomeness, but it was impossible to say on what this depended and so it might be with different brandies.

LARYNGOLOGICAL SOCIETY OF LONDON.—At a meeting of this society held on Dec. 2nd Dr. E. Law showed a case of Incrustations in the Trachea which had been shown at the previous meeting. The patient suffered from considerable dyspnœa and the question was raised as to whether tracheotomy might not be necessary.—Dr. A. Bronner showed some crusts from a case of dry catarrh of the nose and nasopharynx, which had been treated by formalin spray.—An interesting case of Epithelioma of the Larynx was shown by Sir Felix Semon. Thyrotomy had been performed but was followed by fairly rapid recurrence. Subsequently a great part of the affected half of the larynx was removed and the man made an excellent recovery. The striking part of the case was the extraordinarily good voice left.—An exceedingly rare case of a Bony Growth in the ethmoidal region of the Nose in a girl was shown by Mr. H. Lambert Lack. There were obstruction of the maxillary ostium from the growth and mucocele of the antrum. The diagnosis microscopically suggested was ossifying sarcoma.—Two cases were shown of Tumours in the neighbourhood of the tonsil; one by Dr. Wyatt Wingrave in a female, aged 64 years, and the second by Dr. H. Tilley in a young man. In Dr. Tilley's case there were a large number of enlarged cervical glands, and in both cases the diagnosis was that of lymphosarcoma. In the second case the glands and the enlargement of the tonsil had almost entirely disappeared under the influence of large doses of arsenic.—An interesting case of Chronic Laryngitis in a man, aged 32 years, was shown by Dr. G. C. Cathcart. The general opinion of members was that the condition was one of extreme pachydermia.—Mr. F. J. Steward showed a case of Complete Paralysis of the Left Vocal Cord due to a tumour of the thyroid. The clinical aspects of the tumour were those of non-malignancy, but the case was shown with the view to eliciting opinions as to the question of malignancy.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Nov. 23rd, Dr. J. K. Kelly, the President, being in the chair.—Dr. A. W. Russell read notes of a case of Epileptiform Attacks complicating Double Ovarian Tumour and ceasing after removal of the growths which were found to be large ovarian tumours, partly cystic and partly solid. On microscopic examination carcinomatous tissue was found. There had been no return either of the epileptic attacks or of the pathological growth.—Mr. Donald Duff read notes of a case of Uterus Didelphys with Septate Vagina. The patient complained of dysuria and profuse vaginal discharge; menstruation had been normal. Examination showed vaginitis and urethritis. A slight thickening was subsequently found at the left side of the hymen; this contained an opening into a second vaginal canal. On careful palpation after the acute symptoms had subsided it was found that there were two distinct vaginæ of equal length and two cervices, with a distinct intervaginal septum complete from the hymen to between the cervices. The fundus was not felt. The patient some months later had a miscarriage, the pregnancy taking place in the right uterus. The passage of a sound then showed two uteri completely separated. Mr. Duff acknowledged his indebtedness for the case to Dr. G. Balfour Marshall.—Dr. Balfour Marshall read notes of a case in which a patient had worn a vulcanite ring pessary for 15 years. She was aged 60 years and had passed the menopause 26 years previously. She was admitted to the Glasgow Royal Infirmary complaining of dysuria and blood-stained vaginal discharge. The symptoms closely resembled malignant disease. The pessary, which had caused ulceration of the vaginal walls and become imbedded, was removed by cutting through the tissue which surrounded it.

Reviews and Notices of Books.

Studies Contributed to the "Dublin Review" by the late Dr. J. R. Gasquet. With an Introduction by the Right Rev. J. C. HEDLEY, O.S.B., Bishop of Newport. Edited by DOM H. N. BIRT, O.S.B. Westminster: Art and Book Co. 1904. Pp. xi.-349.

IN an interesting volume of Studies contributed by the late Dr. J. R. Gasquet to the *Dublin Review*, now collected and published as a memorial and as a tribute to his ability and wide erudition, there are three papers of considerable interest to medical readers, the remainder of the volume comprising a number of learned and profound studies on subjects connected with Roman Catholic Church history and Apologetics. The three articles deal respectively with hypnotism, the "cures" at Lourdes, and the physiological psychology of St. Thomas Aquinas, subjects with all of which Dr. Gasquet was particularly qualified to deal. The brief sketch of his life appended to the volume shows that after a short period spent in general practice Dr. Gasquet devoted himself to the study and treatment of mental disease, while throughout his life he continued his interest in the studies of philosophical, metaphysical, and theological subjects. He was undoubtedly a man of profound learning, unusually widely read, and a zealous adherent to the Roman Catholic Church. The literary style of these Studies is peculiarly pleasing, clearly expressed in elegant but not pedantic phraseology. They deal with controversial matters with an incisive criticism and a very clear statement of the points at issue.

The essay on Hypnotism, though originally published so long ago as April, 1891, contains a concise and interesting statement of the opposing views of the Salpêtrière and the Nancy schools, to which there is little to add at the present time, while in his discussion of their results Dr. Gasquet shows the paramount importance of suggestion as a factor in the production of many, if not all, of the hypnotic and post-hypnotic phenomena and gives in his general adhesion to the views of the Nancy school which are nowadays usually adopted by most scientific workers in the field of hypnotism. The Salpêtrière school originally taught that hypnotism could only be successfully produced in persons of hysterical temperament and by means of physical agencies producing a monotonous stimulation of the nervous system, while the Nancy school has always maintained that hypnotism is induced by suggestion, that the physical agencies so frequently utilised in its production act by putting the subject into a state of expectancy and attention, and that healthy persons are more readily influenced, hysteria being an obstacle to successful hypnotism rather than an essential. Dr. Gasquet points out that whichever view be adopted an explanation is needed which shall connect hypnotic phenomena with the more usual incidents of mental life, and he gives a brief statement of Professor Heidenhain's hypothesis that the highest cerebral centres are temporarily exhausted

by the monotonous stimuli used in producing hypnosis and thus prevented from exerting their normal inhibiting and controlling functions, and therefore suggestions from outside are the more readily acted on uncontrolled. He then discusses the dangers of hypnotism, more especially as a result of post-hypnotic suggestion, or *suggestions à longue échéance*, and gives again the rival views of the two schools—that of the Salpetrière school that the moral sense would prevent the performance of crime in the hypnotic state in an otherwise normal person, and the opposing view of the Nancy school that criminal suggestions would be acted upon in the same manner as the ordinary suggestions are. Dr. Gasquet's views are so well thought out and so temperate that they may with advantage be quoted: "Perhaps we shall do best to suspend our judgment and meanwhile to hold that at any rate only a very small proportion of hypnotised subjects lose all power of resistance. It is unfortunate there should be this conflict of opinion concerning the most important practical question of all. ..... At first sight the dangers of hypnotism seem so great that the temptation is to exaggerate them, but further consideration reduces them to human proportions and teaches us they may be controlled."

The essay on the "cures" at Lourdes is an impartial and critical examination of the evidence available both in the records of the Bureau de Constatations Médicales and that obtained by personal investigation at Lourdes, and contains suggestions for the scientific scrutiny of alleged cures. Dr. Gasquet naturally wished to believe in the miraculous nature of some of these but there is no trace of bias in his statement or discussion of the matter. He spent the month of May of the year 1894 at Lourdes in order to examine personally the records and to observe such pilgrims as might come to the shrine, and for his inquiries he was given every facility by the officials, notably by the medical officer, Dr. Boissarie, of whose ability, acumen, and character he wrote in the highest possible terms. Dr. Gasquet confessed that before his visit to Lourdes he was suspicious that Dr. Boissarie in his book[1] might have unconsciously been led by religious enthusiasm to exaggerate but found that these suspicions were at once disarmed upon personal acquaintance with the man whom he then regarded as unquestionably sincere. Dr. Gasquet's account of his observations at Lourdes is the most interesting part of his essay. He was much impressed by the absence of any attempt to excite the pilgrims and also by the lack of any manifestations of hysterical outbursts or of hypnotic phenomena, for both of which he was keenly on the watch. He observed decided improvement and often complete recovery in a majority of cases that came for examination after visiting the shrine and, excluding a few special cases, the improvement was not more than could conceivably be produced by the action of the mind on the body. These ordinary cases he divided into two classes: firstly, the neurotic pure and simple—such as cases of hysterical paraplegia and paralysis; and secondly, those with organic disease in whom the general condition was improved without direct effect upon the organic lesion. But, excluding these, there remained the few special cases in which the improvement was so striking as to be apparently miraculous, and it is such cases which Dr. Gasquet thought sufficient to justify careful inquiry on the part of all who might be interested and could spare the time to visit Lourdes. He quotes certain of these cases which, if the records are to be relied upon, are certainly wonderful, but the details in each are not full and all the requisite conditions for conviction seem not to be present in any one case. In fact, as Dr. Gasquet himself writes, "One of the hardest lessons that we all learn in life is not to trust to the fairest appearances without careful and personal examination"; and probably there are few who would be convinced without personal examination of the supposed cure, both before and after visiting the shrine.

[1] Lourdes: Histoire Médicale. Paris: Lecoffre, 1891.

The last essay in the volume is that on the Physiological Psychology of St. Thomas Aquinas and comprises a statement of the more important conclusions of that remarkable man and profound philosopher and in it Dr. Gasquet proceeds to demonstrate that the psychology of Aristotle as stated by St. Thomas is in substantial accord with the conclusions of modern science, the main conclusions of which it has in many instances completely anticipated. It was a fundamental feature of the Thomist philosophy that sensorial always accompanied intellectual activity and this coincides with the modern conception of psycho-physic parallelism, that the intellectual functions are the expression of change in the higher cerebral centres. Again, St. Thomas affirmed very strongly that the passions (love, fear, hatred, anger, and the like) are affections of the body as well as the mind—a view also taught by Aristotle—and Dr. Gasquet states that Spinoza's account of the passions is a fragmentary echo of the Thomist description, derived from Descartes. Again, another anticipation of modern ideas is the teaching of "internal senses"—viz., that sensory impressions are in all the higher animals and man further elaborated by a series of mental processes associated with the activity of nerve centres. In this connexion it is of interest to note that both the great masters whom St. Thomas followed, Aristotle and Albertus Magnus, under the latter of whom he studied at Cologne, were ardent students of natural history, dissecting many animals to pursue their studies, and thus, although St. Thomas has been described as the "spirit of scholasticism incarnate," we find him far in advance in his conclusions of so many of his successors who adopted the purely introspective method of studying cerebral activities.

The Problem of the Milk-supply. By F. LAWSON DODD, M.R.C.S. Eng., L.R.C.P. Lond., L.D.S. R.C.S. Eng., D.P.H. R.C.P.S. Eng. London: Baillière, Tindall, and Cox. 1904. Pp. 77. Price 1*s.* 6*d.* net.

IN these pages a summary is given of a question the importance of which is becoming daily more apparent. The author says that great care has been taken to avoid overstating the dangers attendant upon the ignorant and unhealthy methods of milk production which at present prevail throughout the country; and yet the chapters on How Milk is Produced and on Milk Transit are sufficient evidence of the inoculation of an almost pure medium with unknown quantities of dirt. The prevailing conditions are hinted at in an apt quotation of a rural wiseacre: "If the Almighty had meant manure to be kept out of the pails he would have put the udder at the other end of the cow." The prevention of milk-borne disease and the bringing of a pure and clean milk-supply within the reach of the poorer classes are the ends aimed at by the author. For the first the better education of the producer, fairer remuneration for the dairy employés, and more capital expenditure on the farm are imperative conditions of progress. To attain the last object there must be such organisation of production and distribution as will effect greater economies and thus counterbalance the increased cost. The author quotes the increasing infantile mortality with the declining birth-rate, the increasing death-rate among males over 35 and among females over 45 years of age, and the case for physical deterioration shown by the Director General of the Army Medical Service in his report on the "physical unfitness of men offering themselves for enlistment." The medical authorities of the army find that nearly 28 per cent. of those who offer themselves have proved unfit for military service. The bulk of the recruits are, of course, drawn from the poorest classes. While there has been a great advance

in the quality of the water- and of the food-supply of the adult population, the supply of food for the very young has deteriorated in quality, in spite of legislation, owing to the flocking of the people to the towns and the decline in the number of breast-fed infants. During the first two years of life the physical foundations are being laid on which the frame is afterwards to be built, and it is for this period of life that there has been a lowering in the quality of the food-supply. A better class of milk under present conditions could only be supplied at a higher cost, an impossible condition where the poor are concerned. For the supply, then, of the poorer classes the author considers that the only possible solution lies in the extension and development of municipal milk-supplies. In connexion with the depôts model farms should be established where the dairy industry could be taught. He says that the municipalities must go further than the institution of mere depôts, they must have the farms under their control in order to insure the best quality of milk. The water-supply has been municipalised because the public health aspect is of such vital importance and from the same standpoint the milk-supply should be municipalised. Such is the contention in this little book which although it contains no new matter yet puts the whole subject clearly before the reader. It may well be read as a careful study of a problem which concerns the whole nation.

A Short Treatise on Antityphoid Inoculation, containing an Exposition of the Principles of the Method and a Summary of the Results achieved by its application. By A. E. WRIGHT, M.D. Dub., late Professor of Pathology, Army Medical School, Netley; Pathologist to St. Mary's Hospital, Paddington. London: Archibald Constable and Co., Limited. 1904. Pp. 75–x. Price 3*s.* 6*d.* net.

THE prophylactic treatment of certain epidemic diseases of bacterial origin, such as cholera, bubonic plague, and typhoid fever, by the injection of "killed" cultivations of their respective specific organisms has been practised during recent years on a comparatively extensive scale, but even now the collection of statistics proceeds slowly and those at present available are insufficient to render the correct interpretation of the results obtained from the inoculation of such bacterial "vaccines," notably in the case of antityphoid inoculation, an easy matter. The appearance therefore of a short treatise on that particular method of antityphoid inoculation for which Dr. A. E. Wright is responsible is the more welcome at this stage, for therein are reprinted, with some additions, three papers published in the pages of the *Practitioner* for January, February, and March of this year, detailing the successive stages of the author's own experiments and researches in connexion with the problem of the production of immunity in the British army against typhoid fever.

The volume consists of four chapters only, together with a short appendix describing the technique employed in the preparation and standardisation of antityphoid "vaccine" and also a complete list of the author's papers dealing with immunisation against bacterial diseases. The first two chapters of the book are devoted to the theoretical considerations and experimental proofs of the principles of protective inoculation, and in this connexion the author particularly emphasises the law relating to the initial negative and subsequent positive phase of the immunity reaction following the injection of the "vaccine," and while pointing out that the existence of the negative phase will serve to explain the occasionally observed increased susceptibility of the inoculated to typhoid fever, details some experiments which indicate the possibility of reducing the duration of, or even entirely eliminating, this negative phase by careful dosage.

The proof of the efficacy of the typhoid "vaccine" employed by Dr. Wright in his inoculations to stimulate the elaboration of the necessary antitropins, although not given in detail, is summarised shortly from the author's various published papers; and in this connexion we could wish that he had described his experiments as well as his results, for an account of the gradual progress of his brilliant work in the field of protective immunisation against bacterial invasion could not fail to be as full of interest to the general reader as it would be of instruction to the younger generation of research workers. The question of the possibility of provoking the effective formation of antibodies by the ingestion of typhoid "vaccine" is touched upon and a few very suggestive experiments are described, although the author does not apparently anticipate that any practical end would be served by this method of inoculation.

The third chapter details the technique of antityphoid inoculation and describes the clinical symptoms following the injection of the "vaccine," and although valuable from a purely practical point of view does not, from the point of view of preventive medicine, possess the attraction of the fourth chapter which deals with the results of antityphoid inoculation as shown by statistics. In dealing with the available returns of the inoculated and the control groups of uninoculated men Dr. Wright is careful to set out the various fallacies and errors that are inseparable from, and tend to vitiate, statistics of this character and by showing how such flaws may best be avoided, eliminated or corrected, provides the reader who is unfamiliar with the manipulation of figures with many useful hints which may readily be applied to the interpretation of statistical results other than those immediately in question. The statistics which Dr. Wright presents to the reader relate to more than 20,000 inoculated men and are contrasted with over four times that number of uninoculated; and by a critical study of the returns in the light of the commentaries appended it is shown that the incidence of the disease is diminished by at least one half as the results of antityphoid inoculation; whilst the case mortality shows a similar diminution in favour of the inoculated.

Whilst we have no desire to enter into the discussion on antityphoid inoculation now engaging the attention of both the medical and the lay press, and which from its present personal tendency threatens to obscure the real issues, we cannot help feeling that it is a matter of congratulation that a method which has been, so to speak, hall-marked by the antityphoid committee of the Royal College of Physicians of London, the professorial staff of the Royal Army Medical College, the medical department of the German army, and the War Office Antityphoid Committee in turn, is once more to be utilised in the British army.

The division of the subject matters into paragraphs and short sections by means of headlines in distinctive type, headlines which frequently are expanded to such a length as to serve as abstracts of the following paragraphs, has apparently prompted the author to dispense with the usual index, a lengthy table of contents being the reader's only aid in his search for particular points. The majority of the charts, too, leave much to be desired with regard to the style in which they have been reproduced.

LIBRARY TABLE.

The Morality of a Crime. By Sir WILLIAM B. DALBY. London: Harrison and Sons. 1904. Pp. 96. Price 1*s.*—Sir William Dalby's little novel might have been more accurately entitled the morality of two crimes, for the book is divided into two parts, each of which has its separate ethical question. In the first part the problem is whether a man has a right to put an end to his life when he knows

that he is doomed to die a lingering and painful death; in the second the problem is whether a man has the right to desert his wife when she is ruining him by her lack of principle. In the guise of a story Sir William Dalby propounds these questions for solution and we believe we are right in guessing that he considers that both suicide and desertion can be justified in circumstances where longer endurance could make n difference to the issue. He is, however, clearer in the first answer than in the second. If a man must die why may he not die before he is broken down by disease, mutilated by operation, and prostrate with months of pain? One of Sir William Dalby's characters asks himself this and decides that he is not called upon by any morality to suffer purposeless agony. So John Flint, the hard-headed and successful barrister, commits suicide when he is doomed by the medical man to perish from cancer. His son, Arthur Flint, has not such a good case. He has to consider if a man is separated from his wife by every thought and instinct, so separated that neither physical nor mental union will ever be again possible, whether he may not be justified in actually deserting her? We think that here Sir William Dalby hesitated. He wished to say that neither party to such a so-called union was benefiting by keeping up further pretences, but having got that far he saw the social awkwardness of such rough readjustment of ill-formed marriages. Anyhow, we do not learn what his views are, but those of all sound sociologists would be on the side of a preservation of the formal tie and against Arthur Flint. Sir William Dalby's subjects are too terrible to make his book anything but sad reading, while the intent to introduce for discussion two social problems of the first importance within the space of so few pages has spoilt the shape and simplicity of his work. But for readers who wish to be made to think he presents grave material for contemplation.

Stanford's Geological Atlas of Great Britain. Based on Reynolds's Geological Atlas. By HORACE B. WOODWARD, F.R.S., F.G.S. London: Edward Stanford. 1904. Pp. x.–139 and 50 plates. Price 12*s.* 6*d.* net.—This is a most interesting volume. It commences with a short account of the geological structure of Great Britain and of the several counties making up that country, together with the geological and other features observable along the chief lines of railway. Then follow the maps most of which deal with one county only, although Surrey and Sussex appear on one plate. There are also 16 plates illustrating the different fossils to be found in the various formations. Anyone who takes this book with him on a holiday will find it add greatly to the interest of his expedition and, above all, he should read it in combination with Lord Avebury's delightful book "The Scenery of England." Most dwellers in London know and love the Weald and its boundaries and a perusal of this atlas and of Lord Avebury's book will give them a very clear insight into the causes which have carved out the Weald and into those to which are due its many beautiful features.

Philip's Handy-Volume Atlas of London. Fourth edition, revised and enlarged. London: George Philip and Son, Limited. 1904. Price 5*s.*—This is an admirable work of reference. It contains a directory, 55 sectional maps on a scale of three inches to the mile, 14 special maps and plans, cab fares, and an index containing some 13,000 references. If the immortal Soapey Sponge were now alive he would certainly replace his "Mogg" by this atlas, for not only could he calculate the cab fare from Kilburn to Piccadilly but he could at a glance see all the streets through which he ought to go. The atlas includes the whole of the county of London, which is such a vast area that we are certain that no one average dweller in London knows one tenth part of it. It stretches from Chislehurst to Muswell Hill and from Snaresbrook to Wimbledon. The maps are very clear and the names of streets can be read without difficulty. Also the book is of a handy size, being only seven and a quarter inches by four inches. It will be equally useful to the Londoner and to the stranger.

Official Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. London: Charles Griffin and Co. 1904. Pp. 288 and index. Price 7*s.* 6*d.*—A handbook of this nature is indispensable for journalists and especially for scientific journalists. It gives an account of all the scientific and learned societies of the kingdom, their objects, officers, dates of meetings, and in most cases of their publications or of papers read during their sessions. It is clearly printed and there is an excellent index.

Lemco Dishes for all Seasons. By EVA TUITE. London: Lemco. Pp. 116 and index.—Lemco is the original extract prepared by the Liebig Company and has avowedly but little food value. But it is a stimulant to gastric digestion and gives a pleasant flavour to many food substances. The little book before us contains some admirable receipts, most of which are flavoured with Lemco, though some sweet dishes receipts for which are given are, of course, made without it. In small households where there is not enough meat consumed to enable the cook to keep a stock-pot meat extracts will be found very serviceable; they contain, however, so much potash salt that they should be used with caution.

We have received from Messrs. Pears a copy of *Pears' Annual* for Christmas and as usual the *Annual* compares well with the Christmas numbers of the best and most firmly established illustrated papers. The coloured illustrations with which the text is freely diversified are for the most part pretty things prettily reproduced, while the three coloured supplements are all genuine works of art.

New Inventions.

HAND-POWER OTO-MASSEUR.

Messrs. Krohne and Sesemann of 37, Duke-street, Manchester-square, London, W., have made this machine at the suggestion of Mr. Richard Lake. The piston or air-pump A differs in no material way from those in use on other machines. Up to the present time the limit

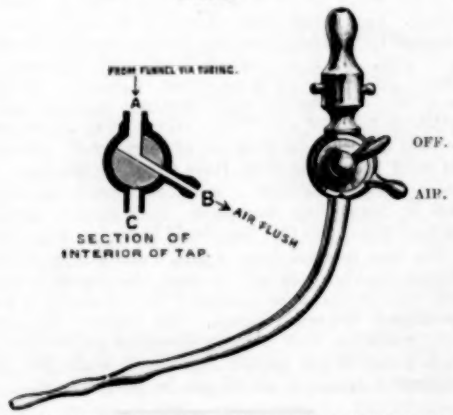
of speed in all the less expensive instruments was at the outside a few hundred vibrations per minute; with Mr. Lake's instrument the pace of 1500 vibrations per minute can easily be obtained and kept up by making one complete revolution of the handle every second. Another advantage afforded by this instrument lies in the readiness with which the vibrations or strokes of the air-pump per minute can be estimated, the formula being: divide by four the number of revolutions of the handle per minute and add two cyphers to the result. By means of the screw adjustment C, which is the outcome of experiments

carried out by the above firm, the length of the piston bar B is increased or diminished at will, and thereby the strength of the pump is regulated.

COMPLETE APPARATUS FOR VENOUS AND SUBCUTANEOUS INFUSION IN STERILISER, WITH IMPROVED VENOUS INFUSION CANNULA.

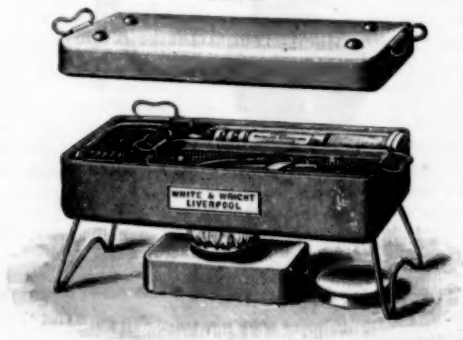
BY the use of this cannula the chief disadvantage of the ordinary one, that it cannot with safety be left *in situ* in case further infusion should be necessary, is obviated. Before inserting into the vein the cannula is flushed through and filled in the ordinary way, the tap afterwards being

FIG. 1.



turned to "off." When the nozzle has been tied into the vein the tap is turned to the intermediate nozzle labeled "air" to see that the stream is flowing well and then full on, directing the solution into the vein. When as much as is required for the time being has been infused the tap is turned "off," the top joint to which the tube is attached is unscrewed, and the cannula is secured to the arm wrapped in a little gauze. If further infusion should be necessary the tube is again screwed on to the cannula, the funnel is filled, and the tap is turned to "air," all the air contained in the tube and upper part of the cannula being then flushed out. As soon as a good stream is flowing the tap is turned full on and the solution is directed into the vein. It will be noticed that a spring arrangement indicates when the various "stops" are reached. The nozzle has three bulbs of different sizes so that one cannula is suitable for any sized vein. The complete apparatus contains a four-ounce glass funnel, six feet of rubber tubing, a silver venous cannula, a subcutaneous infusion needle, a solid forged

FIG. 2.



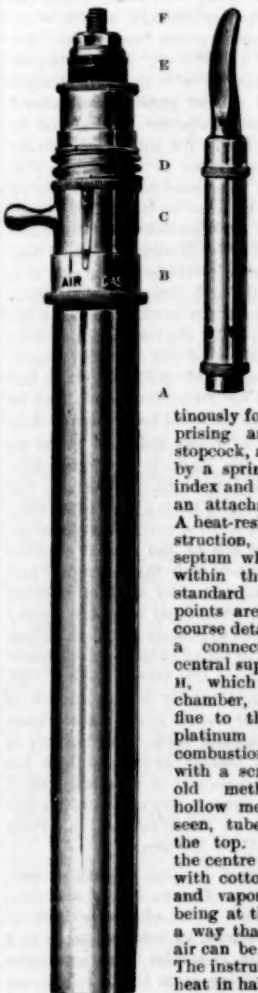
scalpel with blunt dissector end, a solid forged aneurysm needle, aseptic scissors, aseptic dissecting forceps, a metal tube containing needle and silk, a tube of saline tabloids, gauze for dressing, aseptic sponges, and a bandage. The steriliser measures eight inches by four inches by one and a half inches. The advantages claimed for the "set" are: (1) all the instruments and appliances actually required for venous infusion are kept ready to hand in a steriliser in which they can be carried and boiled immediately, the bandage and tube of tabloids only being removed; and (2) since rubber blackens instruments when boiled with them the tubing is boiled separately in the steriliser in the box compartment, which contains the lamp while in transit. This cannula and infusion apparatus have been made by Messrs. White and Wright, 93, Renshaw-street, Liverpool, according to my directions.

W. BLAIR BELL, M.D., B.S. Lond.,
M.R.C.S. Eng.

Liverpool.

A NEW THERMO-CAUTERY.

THE maker and inventor of this new thermo-cautery is Mr. W. H. Beach, of Bridgnorth, Salop, who supplies it for the inclusive price of 10*s*. He states that being present upon one occasion while a Paquelin cautery was in use, the accidental upsetting of the bottle containing the hydrocarbon occurred and convinced him that there were risks in using the apparatus. He therefore decided to devise a cautery in which the bottle could be dispensed with. The Beach cautery consists of the following parts. A stem or handle A acting as a combined reservoir and vaporiser; this chamber is lined with cotton wick which absorbs sufficient hydrocarbon (three quarters of an ounce) to work the cautery continously for one hour. A trunk B comprising an aerator, refrigerator, and stopcock, and collar C, kept to its seat by a spring D; this collar carries the index and air nipple, the latter forming an attachment for the bellows tube. A heat-resisting block E, novel in construction, superimposes a wire gauze septum which prevents lighting back; within this block is a connecting standard F, to which the working points are screwed; these latter are of course detachable, and are made up of a connecting boss G carrying the central supply-tube and the outer case H, which supports the combustion chamber, at the same time forming a flue to the exhaust orifices J. The platinum supply tube as well as the combustion chamber K are mounted with a screw cap I in place of the old method of soldering. The hollow metal handle has, it will be seen, tubes projecting inwardly from the top. The tubes terminate near the centre of the handle which is lined with cotton wick and forms a reservoir and vaporiser, the gaseous mixture being at the same time aerated in such a way that the proportion of gas and air can be regulated with great nicety. The instrument can be raised to a white heat in half a minute, and similarly by allowing a blast of cold air to force its way in the heated portion of the instrument can be expeditiously cooled. The heat-resisting block, which with the septum renders it impossible for the gaseous mixture to light back and explode, is constructed of ebony with mica washers above and below, the bore in the ebony being greater than that of the standard, so that there is no metallic contact with the block. We have employed the cautery in treatment and find it very handy. The platinum point is easily raised to, and kept at, the desired temperature, when by a little practice the method of working the instrument has been learned. The absence of the benzene bottle is a great convenience.



THE LANCET.

LONDON: SATURDAY, DECEMBER 17, 1904.

The Medical Arrangements in the South African War.

THE report which has just been issued on the medical arrangements in the South African war by the late principal medical officer of the South African Field Force, Surgeon-General Sir WILLIAM DEANE WILSON, K.C.M.G., is an official document of the greatest importance. All the points connected with the medical history of that war, whether contentious or otherwise, are passed in review and are duly weighed and considered, the scope of the document is of a very comprehensive character, and it is replete with information on medical service in modern warfare. Owing to the officially responsible and authoritative position which Surgeon-General WILSON held in the field throughout the campaign he must have been well acquainted with the events which go to make up its medical history, so that we can feel certain that the various statements and the corresponding deductions have their foundations upon fact. Lest it might be thought that as the head of the medical service in the field Surgeon-General WILSON set about framing and constructing his report merely with the object and on the lines of vindicating his department we may say at once that such is not at all the impression that we have formed. He has succeeded in great measure in doing this we may venture to hope and to believe, but to take such a limited view of the plan of the report is altogether to miss its meaning. Everything connected with the late war in South Africa, including the medical arrangements, having indeed been already subjected to exhaustive inquiry and report by several commissions and committees, there is no need of this being done at the present time. It is impossible not to be struck with the honesty and care with which the statements of fact connected with the late war have been set forth and with the manifestly fair and judicial spirit in which these have been weighed as well as by the temperate way in which the conclusions arrived at have been expressed.

The report itself consists of 16 parts and, supplemented by the appendices, covers altogether 395 pages exclusive of the very useful illustrations, maps, and plans with which it is copiously provided. An adequate consideration of such a document, particularly as many of the topics are fraught with the highest scientific and even national interest, will not be expected from us in a hurry, and all that we now propose to do is to advert to a few preliminary points. Surgeon-General WILSON in a covering letter to the Director-General of the Army Medical Service in submitting his report takes the opportunity of expressing his warm appreciation and thanks to all concerned—whether civil, military, or colonial, or belonging to the Red Cross Society or to the various voluntary and philanthropic organisations and many private individuals whose aid and devotion, he says, made it possible for him "to carry out a task which far exceeded any anticipation, both in magnitude and duration." It is impossible here not to be reminded that the military medical arrangements of the country are largely dependent upon voluntary assistance; nor can we blind ourselves to the fact that while this seems very alarming in times of war when it leads us into actual misery and to the brink of disaster, in times of peace no one seems to mind. Part I. of the report sets forth a general account of the medical arrangements, and is sufficiently illustrative of our words, for it shows the state of complete unpreparedness in which we were when the war in South Africa began and the enormous force which, as everybody knows, had to be provided for medically in that country ere it ended. In concluding this section of his report Surgeon-General WILSON briefly but ably summarises the features of the campaign by which the medical arrangements in the South African war were chiefly affected. He calls attention, as we have so often done, to the unexpected magnitude and duration of the military operations and to the strength of the forces engaged as compared with the *personnel* of the medical service; he shows the labour imposed upon the medical service in having to provide the requisite hospital accommodation over and above that which had been at first estimated for; and he lays stress on the very exceptional nature and unforeseen changes in the plan of campaign. We are not surprised to find that the difficulties of transport are described as the greatest obstacle with which the work of the medical service had to contend. Surgeon-General WILSON holds them largely responsible for the difficulties in the advance from the western line to Bloemfontein and for the unfortunate conditions which obtained there for some weeks after the entry of our troops. The lapse of time that has taken place since the occurrence of the epidemic of enteric fever at Bloemfontein and, indeed, since the end of the war has enabled Surgeon-General WILSON to mature his opinions. The result is an instructive and well thought-out report about which we shall have more to say.

Pathological Research in Insanity.

OF late years the problem as to the best method of dealing with recent and curable cases of insanity has been receiving increasing attention. The ordinary plan of the county asylum has been, and doubtless still is, to classify such cases separately but the classification in most instances has not gone beyond the provision of a separate ward or wards for them. Some county asylums, we are aware, have provided a separate "acute block" or "acute" hospital, equipped at considerable expense, and designed to receive and to treat all curable cases, while others are contemplating a similar provision. The experience thus being gained will in course of time afford the basis for a comparison of great interest and value between the newer and the older methods. It is but reasonable to hope that more cases will recover and that recovery will be expedited under the newer method. But however

admirable the plan of segregation of recoverable cases may appear in theory, public bodies intrusted with the administration of public funds cannot be expected in any general way to sanction the considerable expenditure which the erection and equipment of these special blocks entail without practical evidence of their economical value.

The scope of inquiry as to the best means of disposal and treatment of recent and curable cases of insanity is, however, wider than the above considerations would indicate. The question of the desirability of adding wards and out-patient departments for mental cases to hospitals in the great centres of medical education throughout the kingdom is one of much importance. It has already received consideration and practical solution in various parts of the continent and is, no doubt, attracting increasing attention in this country. The conception of the acute block of the county asylum appears to us to be sound in principle, and even with departments for the observation and treatment of mental diseases as part of the great teaching hospitals there would still be need of them, especially in counties remote from large centres of activity. The chief arguments for the creation of such departments are based upon the axiom that workers in special departments of medicine should keep in touch with workers in "general medicine," the theory being that no real grounds exist for the divorcement of insanity from other diseases in the matter of study and treatment. This principle is unfortunately most difficult to observe in practice in consequence, primarily, of the inconvenience and risk that attach to the conduct of patients suffering from insanity. The importance of the subject in regard to the welfare of the community is a sufficient justification for strenuous efforts being made to surmount the difficulties of the case.

The establishment of departments for treating recent and curable cases of insanity in large centres in the manner referred to would facilitate the solution of a further difficulty in the way of the scientific study of mental disorders by enabling the pathological laboratory, which is found in connexion with most asylums, to be in a central and accessible situation and yet not divorced from the clinical department. The great advantage of collaboration in this respect has repeatedly been pointed out. It is undoubtedly a sound principle that clinical investigation and pathological research should go hand-in-hand; that the laboratory worker should be in touch with the wards. The usual method of observing this principle in the department of insanity is to have the laboratory in connexion with the county asylum. An authority controlling several asylums in some cases has a well-equipped laboratory at each or most of these, as in Lancashire and the West Riding of Yorkshire. In London, as is well known, the pathologist to the asylums of the County Council is provided with a laboratory at one of those institutions. It appears to us that if—to take as examples the cases mentioned—the pathological laboratory were placed in Manchester, Liverpool, Leeds, and London respectively, in conjunction with a department for mental diseases at a hospital, there would be a conservation and concentration of energy in respect of the work to be done and the cause of scientific investigation of the pathology of insanity would benefit. The asylum pathologist would be brought into direct communication with workers in general pathology, bacteriology, and organic chemistry, in addition to clinical workers. The laboratory would be more largely sought by those desirous of conducting research, including holders of research scholarships. The likelihood of its being advantageously used for extended and conjoint experimentation (which is decidedly remote where laboratories, as now, are numerous and scattered and situated in comparatively inaccessible places) would be enhanced. By these means the work of cerebral and mental pathological research, so intricate and so almost unfathomable, would be consolidated and made more likely to produce successful results in "ministering to the mind diseased."

Medical Men as Administrators.

IT has become so generally the practice to place not only the medical but the administrative control of institutions for the sick in the hands of medical men that we may well devote a little time to the consideration of this procedure in order to decide whether the method is one deserving of encouragement or one to be discountenanced. The art of managing men and women is—like many other valuable ones—not taught in our educational centres; it must be learned in the school of experience. In an institution [redacted] actions of human personalities are more [redacted] are the casual contacts of life in the wo[redacted] mental attitude of the individual is [redacted] the moulding influences of the envir[redacted] in our asylums and infirmaries—th[redacted] ruled by medical men—forms a de[redacted] own special virtues and failings, [redacted] limitations, and its own ethical pri[redacted] opinion. Only those who are, or hav[redacted] a community can acquire a thoro[redacted] internal economy and of these membe[redacted] of the medical profession are, from thei[redacted] deeper insight into human nature, the most [redacted] the patience, tact, and other manifestations [redacted] mindedness which are essential to efficient working.

It must, however, be admitted, as our lay contemporaries will, no doubt, hasten to point out, that "scandals" are by no means infrequent in institutions which are nominally managed by medical men. The reason for this state of affairs is not far to seek. It is to be found in the fact that in very many cases the medical superintendent is not allowed to superintend; his powers are not commensurate with his responsibilities and he is constantly thwarted and handicapped by those who should be his supporters. The system of government by committee is the principal source of the difficulties which occur in institution work. It is not suggested that medical superintendents as a class are exempt from the liability to make mistakes or that they are free from the human weaknesses which militate against anything in the way of ideal administration but in both these respects they are a long way ahead of the average committee-man. The domination of the committee is an expression of the principle that the expenditure of public money should be controlled by those who provide the funds but it cannot be truthfully said that this end is very satisfactorily attained at present. There

is, of course, something to be said for the argument that he who pays the piper should call the tune. But how if the purse-bearer has no ear for music? This is, in effect, the position in which democracy has landed us; the tendency is to place in office men whose chief qualification is self-assertiveness and who have no desire to listen to anything more melodious than their own voices. We readily admit that this description does not apply to all, or as yet even to a majority of, popular representatives but unfortunately quite a small proportion of irreconcileables on a committee will suffice to block all progress. As numerous opportunities of studying the defects of the current system have been accorded to us we propose to indicate some of the ways in which committees of management betray the interests which they have been appointed to promote. Meeting once a month or once a fortnight for a few hours, with a lengthy vacation in the summer, the committee, however good its intentions, can never obtain more than a superficial acquaintance with the inner life of the institution which it controls but this consideration does not weigh with it in the least. It settles off-hand complex questions which have exercised the mind of the superintendent for a long period, very possibly reversing its decision on a subsequent occasion. Swayed by the passions engendered of self-interest, personal animosities, or party politics, it veers from irrationality to irrationality. It grants funds freely for some fatuous purpose and practises a niggardly economy where liberality would be wisdom. It makes wild suggestions which cannot be carried out and demands voluminous reports which it never finds time to study. It postpones indefinitely the consideration of important matters and appoints special subcommittees to deal with trivialities. It distributes reprimands and rewards without obvious relation to anything but the luncheon hour and insists upon being treated with a deference which it does nothing to inspire. Often a committee is more or less completely under the control of one or two individuals with axes to grind. In the former case the axe is ground, in the latter the competitors probably do not get beyond wrangling over the grindstone. One danger in particular besets a governing body which follows lines like these. Since the committee cannot be appealed to in an emergency and will not in such a case permit its superintendent to act alone, authority must be delegated to some lay official, usually a clerk, who thereby acquires an influence which he may employ for his own aggrandisement or that of his friends.

Added to the superintendent's difficulty in dealing with his committee as a whole are the conflicts into which the performance of his duty brings him with individual members. Sometimes there are to be found on the platforms of municipal and parochial affairs men whose good faith is an inappreciable quantity. This type of man, detected perhaps in some piece of jobbery by a medical superintendent, is ready to descend to any meanness in the pursuit of revenge. Helped by some creature of his own caste whom he has succeeded in introducing to a subordinate post, he foments disloyalty among the staff or brings before the committee garbled accounts of trivial incidents with a view to obtain public censure of the officer who has offended him. Sometimes the obstructionist is merely a crank—antivaccinationist or what not—who is blind to everything except the supposed merits of his particular hobby which he insists on riding in and out of season. There is, again, the philanderer who gushes over female members of the institution staff or secretly carries on correspondence with them. It was a gentleman of this calibre who supported a motion that nurses applying for appointments should be brought before a certain board on the ground that he "liked to see the pretty girls," while another of the same kidney insisted on climbing into an ambulance to interview the nurse who, to her credit be it said, promptly thrust him into the muddy roadway and left him to a term of repentance. Instances of abuses like these could be quoted by any experienced medical superintendent and the remedy for the evils indicated is in most cases simple enough. The senior medical staff of any institution is pretty sure to have attained that position on its merits and to be worthy of confidence. If that confidence was displayed by boards of guardians and kindred corporations the appointment of medical men to administrative posts would prove as satisfactory in practice as it is sound in theory. The value of a medical training has been over and over again proved by the many members of our profession who have risen to eminence in the administrative affairs of State.

Priority of Invention.

FEW questions are liable to be discussed with greater acerbity, or to be more productive of angry rivalries, than those which turn upon alleged priority of invention or of discovery and it is perhaps not surprising that this should be the case. The well-known philosopher who complained that the ancients had stolen all his best thoughts must, under the conditions which govern the progress of science, be now and again recalled to our memories; indeed, it is common to find that an ingenious and apparently new suggestion, the offspring of a certain combination of circumstances, has been made and acted upon under similar conditions at some earlier time. FARADAY has drawn an almost pathetic picture of the number of thoughts and theories which, having passed through the mind of a scientific investigator, have been crushed in silence and secrecy by his own severe criticism and adverse examination. It perhaps would not be impossible to produce a corresponding one, dealing with inventions or discoveries which have been quite genuine, but which, nevertheless, have been anticipated by others with whose works the subsequent inventor or discoverer was unacquainted, or have been reached simultaneously by two persons travelling along different lines. The most conspicuous example of the latter kind is that which was afforded by those researches of ADAMS and of LE VERRIER which led them independently to assert the existence and to calculate the position of a previously unknown and unsuspected planet; while illustrations of the former kind are of almost daily occurrence in the history of surgery. Quite recently, for example, we saw in a French journal an elaborate account of a method of overcoming a not very common surgical difficulty, coupled with some well-deserved recognition of the ingenuity which had suggested the expedient; the surgeon thus praised and the writer who praised him were alike ignorant that the same

admirable the plan of segregation of recoverable cases may appear in theory, public bodies intrusted with the administration of public funds cannot be expected in any general way to sanction the considerable expenditure which the erection and equipment of these special blocks entail without practical evidence of their economical value.

The scope of inquiry as to the best means of disposal and treatment of recent and curable cases of insanity is, however, wider than the above considerations would indicate. The question of the desirability of adding wards and outpatient departments for mental cases to hospitals in the great centres of medical education throughout the kingdom is one of much importance. It has already received consideration and practical solution in various parts of the continent and is, no doubt, attracting increasing attention in this country. The conception of the acute block of the county asylum appears to us to be sound in principle, and even with departments for the observation and treatment of mental diseases as part of the great teaching hospitals there would still be need of them, especially in counties remote from large centres of activity. The chief arguments for the creation of such departments are based upon the axiom that workers in special departments of medicine should keep in touch with workers in "general medicine," the theory being that no real grounds exist for the divorcement of insanity from other diseases in the matter of study and treatment. This principle is unfortunately most difficult to observe in practice in consequence, primarily, of the inconvenience and risk that attach to the conduct of patients suffering from insanity. The importance of the subject in regard to the welfare of the community is a sufficient justification for strenuous efforts being made to surmount the difficulties of the case.

The establishment of departments for treating recent and curable cases of insanity in large centres in the manner referred to would facilitate the solution of a further difficulty in the way of the scientific study of mental disorders by enabling the pathological laboratory, which is found in connexion with most asylums, to be in a central and accessible situation and yet not divorced from the clinical department. The great advantage of collaboration in this respect has repeatedly been pointed out. It is undoubtedly a sound principle that clinical investigation and pathological research should go hand-in-hand; that the laboratory worker should be in touch with the wards. The usual method of observing this principle in the department of insanity is to have the laboratory in connexion with the county asylum. An authority controlling several asylums in some cases has a well-equipped laboratory at each or most of these, as in Lancashire and the West Riding of Yorkshire. In London, as is well known, the pathologist to the asylums of the County Council is provided with a laboratory at one of those institutions. It appears to us that if—to take as examples the cases mentioned—the pathological laboratory were placed in Manchester, Liverpool, Leeds, and London respectively, in conjunction with a department for mental diseases at a hospital, there would be a conservation and concentration of energy in respect of the work to be done and the cause of scientific investigation of the pathology of insanity would benefit. The asylum pathologist would be brought into direct communication with workers in general pathology, bacteriology, and organic chemistry, in addition to clinical workers. The laboratory would be more largely sought by those desirous of conducting research, including holders of research scholarships. The likelihood of its being advantageously used for extended and conjoint experimentation (which is decidedly remote where laboratories, as now, are numerous and scattered and situated in comparatively inaccessible places) would be enhanced. By these means the work of cerebral and mental pathological research, so intricate and so almost unfathomable, would be consolidated and made more likely to produce successful results in "ministering to the mind diseased."

Medical Men as Administrators.

IT has become so generally the practice to place not only the medical but the administrative control of institutions for the sick in the hands of medical men that we may well devote a little time to the consideration of this procedure in order to decide whether the method is one deserving of encouragement or one to be discountenanced. The art of managing men and women is—like many other valuable ones—not taught in our educational centres; it must be learned in the school of experience. In an institution the interactions of human personalities are more momentous than are the casual contacts of life in the world outside and the mental attitude of the individual is peculiarly subject to the moulding influences of the environment. The executive in our asylums and infirmaries—the chief places which are ruled by medical men—forms a definite community with its own special virtues and failings, its own possibilities and limitations, and its own ethical principles and form of public opinion. Only those who are, or have been, members of such a community can acquire a thorough knowledge of its internal economy and of these members the representatives of the medical profession are, from their wider culture and deeper insight into human nature, the most likely to display the patience, tact, and other manifestations of broad-mindedness which are essential to efficient working.

It must, however, be admitted, as our lay contemporaries will, no doubt, hasten to point out, that "scandals" are by no means infrequent in institutions which are nominally managed by medical men. The reason for this state of affairs is not far to seek. It is to be found in the fact that in very many cases the medical superintendent is not allowed to superintend; his powers are not commensurate with his responsibilities and he is constantly thwarted and handicapped by those who should be his supporters. The system of government by committee is the principal source of the difficulties which occur in institution work. It is not suggested that medical superintendents as a class are exempt from the liability to make mistakes or that they are free from the human weaknesses which militate against anything in the way of ideal administration but in both these respects they are a long way ahead of the average committee-man. The domination of the committee is an expression of the principle that the expenditure of public money should be controlled by those who provide the funds but it cannot be truthfully said that this end is very satisfactorily attained at present. There

is, of course, something to be said for the argument that he who pays the piper should call the tune. But how if the purse-bearer has no ear for music? This is, in effect, the position in which democracy has landed us; the tendency is to place in office men whose chief qualification is self-assertiveness and who have no desire to listen to anything more melodious than their own voices. We readily admit that this description does not apply to all, or as yet even to a majority of, popular representatives but unfortunately quite a small proportion of irreconcileables on a committee will suffice to block all progress. As numerous opportunities of studying the defects of the current system have been accorded to us we propose to indicate some of the ways in which committees of management betray the interests which they have been appointed to promote. Meeting once a month or once a fortnight for a few hours, with a lengthy vacation in the summer, the committee, however good its intentions, can never obtain more than a superficial acquaintance with the inner life of the institution which it controls but this consideration does not weigh with it in the least. It settles off-hand complex questions which have exercised the mind of the superintendent for a long period, very possibly reversing its decision on a subsequent occasion. Swayed by the passions engendered of self-interest, personal animosities, or party politics, it veers from irrationality to irrationality. It grants funds freely for some fatuous purpose and practises a niggardly economy where liberality would be wisdom. It makes wild suggestions which cannot be carried out and demands voluminous reports which it never finds time to study. It postpones indefinitely the consideration of important matters and appoints special subcommittees to deal with trivialities. It distributes reprimands and rewards without obvious relation to anything but the luncheon hour and insists upon being treated with a deference which it does nothing to inspire. Often a committee is more or less completely under the control of one or two individuals with axes to grind. In the former case the axe is ground, in the latter the competitors probably do not get beyond wrangling over the grindstone. One danger in particular besets a governing body which follows lines like these. Since the committee cannot be appealed to in an emergency and will not in such a case permit its superintendent to act alone, authority must be delegated to some lay official, usually a clerk, who thereby acquires an influence which he may employ for his own aggrandisement or that of his friends.

Added to the superintendent's difficulty in dealing with his committee as a whole are the conflicts into which the performance of his duty brings him with individual members. Sometimes there are to be found on the platforms of municipal and parochial affairs men whose good faith is an inappreciable quantity. This type of man, detected perhaps in some piece of jobbery by a medical superintendent, is ready to descend to any meanness in the pursuit of revenge. Helped by some creature of his own caste whom he has succeeded in introducing to a subordinate post, he foments disloyalty among the staff or brings before the committee garbled accounts of trivial incidents with a view to obtain public censure of the officer who has offended him. Sometimes the obstructionist is merely a crank—antivaccinationist or what not—who is blind to everything except the supposed merits of his particular hobby which he insists on riding in and out of season. There is, again, the philanderer who gushes over female members of the institution staff or secretly carries on correspondence with them. It was a gentleman of this calibre who supported a motion that nurses applying for appointments should be brought before a certain board on the ground that he "liked to see the pretty girls," while another of the same kidney insisted on climbing into an ambulance to interview the nurse who, to her credit be it said, promptly thrust him into the muddy roadway and left him to a term of repentance. Instances of abuses like these could be quoted by any experienced medical superintendent and the remedy for the evils indicated is in most cases simple enough. The senior medical staff of any institution is pretty sure to have attained that position on its merits and to be worthy of confidence. If that confidence was displayed by boards of guardians and kindred corporations the appointment of medical men to administrative posts would prove as satisfactory in practice as it is sound in theory. The value of a medical training has been over and over again proved by the many members of our profession who have risen to eminence in the administrative affairs of State.

Priority of Invention.

FEW questions are liable to be discussed with greater acerbity, or to be more productive of angry rivalries, than those which turn upon alleged priority of invention or of discovery and it is perhaps not surprising that this should be the case. The well-known philosopher who complained that the ancients had stolen all his best thoughts must, under the conditions which govern the progress of science, be now and again recalled to our memories; indeed, it is common to find that an ingenious and apparently new suggestion, the offspring of a certain combination of circumstances, has been made and acted upon under similar conditions at some earlier time. FARADAY has drawn an almost pathetic picture of the number of thoughts and theories which, having passed through the mind of a scientific investigator, have been crushed in silence and secrecy by his own severe criticism and adverse examination. It perhaps would not be impossible to produce a corresponding one, dealing with inventions or discoveries which have been quite genuine, but which, nevertheless, have been anticipated by others with whose works the subsequent inventor or discoverer was unacquainted, or have been reached simultaneously by two persons travelling along different lines. The most conspicuous example of the latter kind is that which was afforded by those researches of ADAMS and of LE VERRIER which led them independently to assert the existence and to calculate the position of a previously unknown and unsuspected planet; while illustrations of the former kind are of almost daily occurrence in the history of surgery. Quite recently, for example, we saw in a French journal an elaborate account of a method of overcoming a not very common surgical difficulty, coupled with some well-deserved recognition of the ingenuity which had suggested the expedient; the surgeon thus praised and the writer who praised him were alike ignorant that the same

method had been described and figured in an English book published 20 years before. In such a case it seems not worth while to dispute about priority. It was manifest that the Englishman had been confronted by a certain mechanical difficulty and had seen a way of escape from it; the Frenchman had been confronted by the same difficulty on a subsequent occasion and his mind travelled over the same paths and arrived at the same result. It would be absurd, in such an instance, to deny to the second of the two surgeons precisely the same degree of merit as that which could be attributed to the first and it is manifest that no very special claim could be maintained on the part of either. Nevertheless, if the matter had been one of sufficient magnitude, it is quite conceivable that it might have furnished ground for an active disputation in the press or by biographers.

It is never quite impossible that the real proprietor of some one little ewe lamb in the way of discovery, an ewe lamb that lay in his bosom and was to him as a daughter, may have been aroused to a not entirely unjustifiable sense of grievance by the attribution of his darling to some other, some rich man abounding in flocks and herds, and may hence have been inclined to urge his claim with an emphasis apparently in excess of its importance. From such a case it would be difficult to withhold sympathy, especially as in the medical profession, to its great credit, discoveries can seldom be sources of direct profit; there is therefore the more reason for taking care that any credit to be derived from them shall be assigned where it is due. Hence arises some excuse, and perhaps the only one which can be suggested, for attaching the name of a physician or surgeon to a structure, to an operation, to an injury, or to a group of symptoms hereafter to be described as somebody's "disease," somebody who, if he had not been thus distinguished, would in all probability have been absolutely unknown beyond the limits of his own country or of the circle of friends or students with whom he was brought into personal relations. The average English practitioner would know POTT independently of a fracture and HUNTER independently of a canal; but he is not quite unreasonable when he asks for further information about RAYNAUD or WERNICKE, and feels doubt as to the precise character of the "phenomenon" of the former or of the "sign" of the latter. Sometimes the invention is more important than the individuality; so that we scarcely know of WARD except by his paste or of JAMES or of DOVER except by their powders. This only happens, of course, in the case of comparatively small people; no one, for example, has so far described vaccination as "JENNER'S method." But it is, as a rule, the small people who are the most solicitous about their "claims" and who, not unnaturally, are the most combative in asserting them. So long as the claims are just, and so long as they are not pressed in any manner injurious to the public interest, a large degree of tolerance may be reasonably extended to a natural desire not to remain unknown.

The danger of prophesying is proverbial, but there are many signs that the future of science is more likely to resemble a cairn than a temple, to be a structure reared by the coöperating and almost unrecognisable labour of many contributors rather than by the overmastering idea of a single mind. We do not, of course, forget PASTEUR, and it would be foolish to deny the possibility of similar incursions into the regions of the unknown on the part of investigators whose powers have not yet been fully displayed. But the general tendency seems to be rather in the direction of securing the conquests already made than in that of extending them widely into new territories; while in some conspicuous instances, which we cannot contemplate without at least a shadow of regret, there is a manifest inclination to desert the *terra firma* of established facts for regions of obscure and doubtful speculation. In the progress of science the next step is more worthy of practical consideration than the distant horizon and the most genuine discoverer is he who renders that next step secure. It may be that it seems comparatively unimportant for the moment but it may none the less contain the germ of the future. Work of this kind makes no impression upon the popular fancy and altogether eludes pictorial representation in enterprising newspapers; but it none the less appeals to those who know, and its accurate accomplishment affords just ground for confidence in the subsequent conclusions of those by whom it is undertaken and carried to its close. The proceedings of the Cancer Research Fund, so far as it is at present possible to judge of them, appear to be typical of the precision, the completeness, and the self-abnegation, with which researches having for the sole end the establishment of truth must be conducted. The men engaged in the work are too strictly coöperators to have much opportunity for what is vulgarly known as "discovery" and it is safe to assert that "priority" will have no more than a secondary importance in their eyes. Absolute "priority" must in many cases be indeterminable; so numerous are the instances in which one discovery contains the potentiality, sometimes almost the necessity of another, and in which the extension of our view depends entirely on our position upon the shoulders of our predecessors. It was well known, nearly a century ago, that the use of a mosquito net afforded a large amount of protection against what was then called malaria and possibly some old observer may have alluded to the fact in a suggestive manner. But any dispute concerning the claims of various modern and eminent pathologists founded upon this old knowledge would now be disregarded. The germ of all immunisation was latent in the traditional knowledge of Gloucestershire milkers and illustrations of the same kind crowd fast upon the memory. They should lead to the recognition of the principle which was laid down, we think by LAVATER, that the merit of a discovery does not lie so much with the man who first makes it as with him who first proclaims it in such a manner as to secure attention to its importance. If this were universally admitted a good many claims to "priority" would lapse into insignificance or would be treated with neglect.

CHEMISTS' EXHIBITION.—The Eleventh Annual Chemists' Exhibition, organised by the proprietors of the *British and Colonial Druggist*, will be held in Covent Garden Opera House during five days from March 13th to 17th, 1905.

Annotations.

"Ne quid nimis."

THE ADVANCE IN THE PRICE OF SUGAR: AN IMPORTANT FOOD QUESTION.

THE substantial advance in the price of sugar is a serious matter. Physiologically sugar is of the utmost importance as a food, contributing to the supply of energy to the body more economically than does any other food. It is thus not merely a substance that sweetens things or that appeals to many palates but a real fuel food. When its price becomes considerably enhanced, therefore, its economic superiority as a food is menaced. It is not in our province to discuss the fiscal aspects of the rise in the price of sugar or to express an opinion on the question as to whether or not this rise has been due to a mistaken policy on the part of our legislators. There seem to us to be, however, a few points in connexion with the present high price of sugar which, in view of our interest in the general subject of the public food supply, we may be justified in discussing. It is freely asserted that the rise in the price of sugar is the inevitable result of the Convention which put an end to bounty-fed sugar. "We told you so" is the cheap cry of those who deal in sugar, and yet these very people who, on their own statement, possessed enough foresight to convince themselves that sugar would be very dear, failed to stock supplies when it was cheap and plentiful. To be sure, to be wise after the event is no advantage to the speculator but yet, from a purely sordid point of view why was not sugar bought on a cheap market if some dealers were so confident that the Sugar Convention would lead to a big advance in price? We might take a lesson from the bees and stock our sugar when it is summer (the season of abundance) so that when the winter comes (or the season of shortage) we may have abundant stores to fall back upon. The truth about the present high price of sugar seems to be that the sugar harvest has failed and there is no reason for anticipating that the high price will be permanent unless bad year succeeds bad year. The harvest of sugar may be a failure just as other harvests fail. Fresh demands, too, have been created in the western plantations which, owing to the derelict state of the factories, the sugar-growers have not been able to supply. Such a position will doubtless be remedied in a short time. Certain mineral-water makers and manufacturers of jams appear to have been hit hard over the advance in the price of sugar, although we were not aware that these trades were dependent upon sugar. Many members of the trade, at any rate, have persistently urged that sugar was inferior stuff to glucose or invert sugar made from starch by the action of acids. Glucose was so excellent in the making of beer that many people were poisoned by the arsenic contained in it which was derived from the arsenical sulphuric acid used in its preparation. The use of glucose in the place of natural sugar in aerated beverages and in jam and marmalade, certain manufacturers have been good enough to inform the public, gives an immensely superior product. According to this their grievance over the rise in the price of sugar must be imaginary unless (though we do not understand that such is the case) glucose has advanced in price in the same way as sugar. At any rate, we are not aware that the price of starch has been similarly advanced, and from starch an unlimited quantity of glucose may be made.

KING EDWARD VII. SANATORIUM.

HIS MAJESTY'S Advisory Committee, as will be seen by our advertisement columns, is inviting applications for the post of medical superintendent to the sanatorium. The salary offered is £500 per annum, rising to £600, with board, lodging, and attendance, and candidates, who must, of course, be registered under the Medical Act, are to be 30 years of age or more and must have had practical experience in sanatorium work. The Advisory Committee, it is known, is very anxious to secure a thoroughly good man for the post. The King Edward VII. Sanatorium will naturally be regarded as more or less a model by public bodies or private individuals erecting sanatoriums for tuberculosis and if only for this reason it is essential that the medical management should be in the hands of a thoroughly capable administrator. The contract for the building of the sanatorium does not expire until December, 1905, but as in many ways it is desirable that the superintendent should be appointed a little time before his actual duties commence the committee is now advertising the post. Applications, with testimonials, should be sent in on or before Jan. 31st, 1905, addressed to the Secretaries, 19, Devonshire-street, Portland-place, London, W.

A VILE CONSPIRACY.

THERE is from time to time brought home to every general practitioner the grave risk which he runs in the everyday practice of his profession through unfounded charges being made against him by female patients. Such an accusation may be the result of a hysterical hallucination and the woman who makes it may herself believe that a gynæcological examination has in actual fact been an assault upon her chastity. More often the object of the accuser is to levy blackmail. At the assizes recently held at Swansea an instance coming under the latter category was disclosed in which the most callous cruelty was displayed not only by the woman who made the accusation but also by her husband. It appears that in 1903 Dr. A. D. Griffiths, who has practised for several years in the town of Bridgend, was consulted by the wife of an electrician named Faithfull for some trouble which she thought was the result of her recent confinement. After speaking to the husband on the matter Dr. Griffiths made the necessary examination, at which no third person was present, although Dr. Griffiths had desired that there should be. The condition found was apparently remedied, but in September of the present year the woman again consulted Dr. Griffiths, saying that she had a return of her previous symptoms. An appointment was made for a further examination and this had barely been begun when the husband rushed into the room and assaulted Dr. Griffiths, heaping upon him insulting insinuations. Dr. Griffiths at once consulted his solicitor who demanded from Faithfull that he should institute proceedings in the Divorce Court forthwith. As no steps were taken in this direction within a week Dr. Griffiths claimed damages for assault and slander and it was this action which came before a jury at the Swansea assizes. Neither the defendant nor his wife put in an appearance and a few days before the date of the trial their solicitor stated that he did not know their whereabouts. Mr. Justice Bray, in his summing up, advised that such damages should be given to Dr. Griffiths as would show that the charge brought against him was absolutely disbelieved, and after a few minutes' deliberation the jury awarded him £500. In this bare recital of the facts of the case we have omitted one feature which though a side issue is so odious that it is hardly credible. A few weeks after Dr. Griffiths had commenced his action for assault and slander Mrs. Faithfull summoned her husband before the Bridgend justices for

maintenance, and the day before the case came on she telephoned to Dr. Griffiths that she wanted to withdraw the summons and added that if she only had some money her husband would take her away from the town. Dr. Griffiths very properly referred her to his solicitor. On the following day at the police court she swore to acts of immorality with Dr. Griffiths and within a few weeks she left the town and was met in London by her husband who, it has since become known, had been for some months in an impecunious condition. No words of sympathy can compensate Dr. Griffiths for the distress of mind which he must have undergone during the past three months, but it may be something for him to know that the evidence given at the assize trial by Sir John Williams, by Mr. Wyndham Randall (the senior medical practitioner in Bridgend), and by Mr. J. Ewen Maclean (honorary gynæcologist to the Cardiff Infirmary) when they testified to the correctness of his behaviour was absolutely convincing. It should be also especially pleasing for him to receive from his immediate neighbours, the members of the local branch of the British Medical Association, their congratulations upon his having "so completely justified their trust in his unblemished character." The thanks of the whole medical profession are due to Dr. Griffiths for the resolute manner in which he faced a situation which the bravest man could contemplate with feelings only of dismay.

THE PRESIDENTIAL ADDRESS AT THE AMERICAN NEUROLOGICAL ASSOCIATION.

AT the recent annual meeting of the American Neurological Association held in St. Louis the presidential address was delivered by Dr. Frank R. Fry of St. Louis and an account of it is published in the *Journal of Nervous and Mental Disease* for November. The specialty of neurology, said Dr. Fry, was an instance of the division of labour, a legitimate division resting on the fact that modern diagnostic skill and refinement in diseases of the nervous system could only be reached by persons who had devoted long and earnest study and given close attention to neurology and psychiatry. The basis for the study of these two great branches of medicine had been well and soundly laid during the past 25 years and complex though the problems were with which these departments had to deal they were at the present day being adequately met and steadily solved. The claims of neurological and psychiatrical science were modest; they followed simply the application of the inductive method, by the use of which enough had been accomplished in recent years to justify its further employment in the future. Neurology had fallen into harmony with the methods and spirit of the biological and physical sciences; and psychology, long fettered by metaphysics, had emancipated itself from its bonds and now turns to the more tangible data and methods of the psychiatrist and the neurologist. The public recognition of the value of the results achieved by modern researches in psychology and education is increasing, "and this, of course," says Dr. Fry, "brings us into the councils of pedagogists and State educational authorities." The recent decades of wonderful progress of the surgery of the nervous system were rendered possible only by the physiological and clinico-pathological discoveries which preceded and furnished the knowledge and basis for operative possibilities. Those espousing neurology to-day as a branch of practice or of laboratory research would find that the pioneering had been so thoroughly done that the genuine and the spurious were already well distinguished and demarcated from one another and that the newcomer required a considerable equipment in scientific methods and knowledge to take rank in the actual work. America had contributed her share to its advancement and though it was impossible to give a chronological summary yet a mere enumeration of the names erythromelalgia, athetosis, amaurotic family idiocy, and adiposis dolorosa brought before them well-recognised syndromes of diseases which were first recognised and described and named by American neurologists. The American Neurological Association was organised 30 years ago and had risen since then to the position of a society including representatives of all the best neurological work and research in the United States. 20 years ago in America an occasional lecture with a neurological title in some few of the schools was all that the pupil heard of the subject. "Now every school of any pretension provides for both laboratory and clinical instruction in neurology as carefully as its resources permit." The American Neurological Association has for its aim not only to advance the science of neurology but to broaden its scope as a working branch of the medical profession by bringing it into sympathy and touch with all the sister branches of the profession.

FADS AND FANCIES AS TO FOOD.

THERE is a society in Manchester called the Manchester Physical Health Culture Society. Sometimes its speakers advocate very sensible modes of living and at other times their subjects seem to run away with them. On Nov. 23rd a gentleman gave an address chiefly consisting of a wholesale condemnation of most ordinary foods which he thought were the principal cause of disease. For the ignorance on this subject he considered that the education authorities were morally responsible because they did not teach hygiene in all the schools. Salt was the first thing that came under his ban and he is reported as saying that, "like arsenic, it is an irritant poison," which we must have, but as natural vegetable salt, which is usually boiled out and thrown away, thus drawing a marked distinction between what he calls "organic vegetable salt" and "inorganic mineral salt." The former, he says, enters into chemical combination in the system, while the latter "is merely held in mechanical solution in the blood. ..... When minerals out of the earth, such as salt, soda, lime, iron, phosphorus, sulphur, coal, or brimstone are eaten, they clog the system in much the same way that dust and dirt clog and wear out machinery," and he goes on to say that some eminent authorities ascribe cancer to the use of salt, especially when food such as fish, meat, bacon, and ham is eaten which has been cured by salt. The idea that salt is the cause of cancer is, of course, by no means new and is believed by many as firmly as folks believed some 50 or 60 years ago that brandy and salt would cure everything. He then runs amuck at the use of "fiery spices, as mustard, pepper, ginger, cloves, nutmeg, horseradish, sauces, vinegar, and pickles," passing on to denounce—we must say quite rightly in many cases—the use by manufacturers and vendors of food of such substances as borax, boric acid, soda, baking powder, cream of tartar, aniline dyes, and sulphate of copper for colouring. Hence the foods in which they are mostly used, as jams, marmalade, jellies, milk, butter, margarine, cheese, potted shrimps, sausages, pies, brawn, polony, cured meat, fish, ham, bacon, and many of the tinned foods, ought not to be eaten. "The law ought to forbid these poisons being introduced into the blood." Of course the lecturer condemned tea, coffee, cocoa, meat extracts, and alcohol as not being foods but deleterious stimulants which "mortgage our nervous forces." Aerated waters, he says, are generally unwholesome from their containing preservatives as tartaric and carbonic acids, saccharine, artificial or mineral colourings, and flavourings. "The only liquid necessary for man is water." Sugar and all foods containing it are bad, also honey, while dried, crystallised, very sweet fruit such as dates and figs are little better. "Fats are another popular

but **disease-breeding, death-dealing food. ..... These fats bring on headaches, fevers, colds, and general** debility and it is almost impossible to have a fit, a stroke or heart failure without consuming these foods." He does allow that some fat is necessary but says that it may be obtained from whole wheat, oats, maize, milk, nuts, fish, fowl, and flesh from sheep and oxen naturally fed on pasturage but not from those artificially fattened, like pigs and prize cattle. He, of course, condemns pastry, puddings, cakes, all plain and fancy bread, biscuits, confectionery, and other starchy foods that have any animal or vegetable fat, oil, or butter as an ingredient. At the close of the lecture one of the audience asked anxiously whether Mr. Nawell, the lecturer, would tell him what he might eat. "Mr. Nawell recommends," he said, "vegetables, rice, and salads. Is that all?" He was assured, however, that a few things were still left that a person over 35 years of age might eat safely. This abstract illustrates the curious mixtures of sense and nonsense with which the mental appetites of our intelligent northern people are regaled and shows, also, that the adage "a little learning is a dangerous thing" still holds good.

PATHOLOGY AT OXFORD.

THE University of Oxford possesses an admirably equipped pathological laboratory and, what is even of more value, the services of an excellent teacher in the same subject. The teaching of pathology and the upkeep of the laboratory, however, naturally cost money and in this vital necessity the University is lacking. The laboratory was built and furnished out of a sum of £5000 presented to the University for this purpose by one of its students, Dr. Ewen Frazer, and more recently the Rhodes trustees granted £200 a year for five years certain towards the payment of the Reader in Pathology and the upkeep of the laboratory. It is now felt, however, that the need for obtaining adequate and permanent financial support is so urgent that it has been decided to hold a meeting on Tuesday, Dec. 20th, at 20, Hanover-square, London, W., to which all Oxford men interested in the question, whether medical graduates or not, are invited. Sir William S. Church has consented to take the chair and a large and representative gathering is hoped for. Science is, except in large and comparatively compact commercial centres such as Birmingham and Liverpool, worse endowed than any faculty in the kingdom. It is an expensive subject to teach and its teachers for the most part give their time and knowledge for very inadequate remuneration. It is to be hoped that all Oxford men will contribute and that those of the public who are well endowed with this world's goods will assist in the furthering of a study which has for its ultimate end the relief of human suffering and the building up of a nation composed of healthy individuals who are the very life-blood of a powerful State.

SULPHUR DIOXIDE AS A DISINFECTANT AND DESTROYER OF RATS.

INVESTIGATIONS which have lately been conducted for the medical department of the Local Government Board by Dr. J. S. Haldane, F.R.S., and Dr. John Wade, D.Sc., on the destruction of rats and disinfection on shipboard furnish a valuable contribution to our knowledge of the efficiency of various gases as disinfecting agents. The report on these inquiries, now issued, records a large variety of experiments, some carried out on board a cargo-boat, some in a specially arranged shed, and others in the laboratory, the object of the whole series being to determine the ability of particular gases under practical conditions to destroy certain pathogenic organisms and also rats and insects. A few years ago sulphur dioxide (whether obtained by burning sulphur or from cylinders) appeared to be losing favour as a disinfectant for rooms and dwellings, but recent work has shown that the disinfecting value of this gas had been too readily under-estimated. In particular the experiments made by Dr. E. Klein, Dr. A. C. Houston, and Dr. M. H. Gordon[1] showed that under ordinary working conditions sulphur dioxide can be quite as powerful germicidally as formalin gas and later investigations in Paris have pointed to the same conclusion. In the case of ships sulphur dioxide in one form or another has always been the principal gaseous disinfecting agent used. In the destruction of rats the sanitary authorities of Hamburg, under Dr. Nocht's advice, have had much success with carbon monoxide—the usefulness of which for this purpose was also demonstrated some years ago by Dr. Haldane—but this gas has practically no destructive action on pathogenic bacteria and does not kill insects. The bulk of the experiments which Dr. Haldane and Dr. Wade report have been made with sulphur dioxide in the form of "Clayton gas," a special preparation for the disinfection of ships obtained by burning sulphur in the Clayton apparatus. "Clayton gas" mainly consists of the residual nitrogen of the air, a small amount of unconsumed oxygen, sulphurous acid gas in quantities up to 15 per cent., and a considerable amount of sulphuric acid in suspension. The presence of the last-named makes the mixture white and opaque; its visibility and unpleasantness afford important safeguards against accidental asphyxiation; while its heaviness greatly facilitates the satisfactory distribution of the gas in the space which is being disinfected. The Clayton apparatus is now used to a considerable extent at certain foreign and home ports. The experiments with this gas, which seem to have been contrived very carefully showed that under conditions which are comparatively easy to obtain in practice Clayton gas forms a very efficient disinfectant of the places to which it gains access. As was to be expected, different pathogenic bacteria manifested different degrees of resistance. Anthrax spores were unaffected but plague and cholera bacilli were destroyed after a few hours' exposure to a "Clayton gas" atmosphere containing about 5 per cent. of sulphur dioxide. A point of general importance in connexion with disinfection by sulphurous acid is that the time of exposure proved to be a factor of considerably greater importance than the degree of concentration of the gas. Rats were readily killed; Dr. Wade from a series of experiments made with Dr. M. S. Pembrey concludes that a uniform diffusion of no more than 0·5 per cent. of sulphur dioxide through a hold will kill rats within two hours. Cockroaches and fleas would also be killed under these conditions. These results were obtained readily enough in comparatively empty spaces and in holds not containing cargo. But the results of attempting disinfection, or even destruction of rats, with a ship's cargo left in the hold were altogether different. The penetrating power of sulphur dioxide was found to be very gradual in the case of many articles of cargo, particularly woollen and other fabrics (not cotton), done up in tight bales. This was shown to be due mainly to the property which the fabrics possessed of absorbing the gas. Thus a bale of wool absorbed at least ten times, and a bale of jute at least four times, its own volume. The absorption takes place in the outer layers of the bale and its effect was very marked: in one series of experiments, after many hours of exposure to Clayton gas, the air within the bale contained no sulphur dioxide whatever, although the other non-poisonous constituents of the gas were found to have penetrated freely to the interior. Similar absorptive action was shown by grain and other food substances. In the case of flour the sulphurous acid retained made it useless for

[1] Report of Medical Officer of London County Council, 1901.

baking as the yeast became sterilised. A further objection to the employment of sulphur dioxide to disinfect a large number of articles of cargo is its liability to cause damage. In the case of Clayton gas this liability is increased by the presence of suspended particles of sulphuric acid, although any mischief due to this cause can be prevented by a light covering of paper. Dr. Haldane and Dr. Wade also found that in a hold packed with cargo the Clayton process not only failed as a germicide but owing to the absorption of gas by the bales it was insufficient to kill all rats and insects. They suggest, however, that if it is desired to attempt to kill rats before discharging the cargo a small proportion of carbon monoxide (say 10 per cent. of "producer gas") should be added to the gas used for the holds. They also point out that processes which employ cylinder sulphurous acid, and so are less likely to be destructive to fabrics, are worthy of further trial. Fortunately for commerce, which should not be hampered without good reason, the indiscriminate application of measures for the destruction of rats to vessels which happen to come from plague-infected ports is contrary to the International Sanitary Convention of Paris, 1903, to which Great Britain is a party, and is a proceeding for which there is no warrant at the present time. Mr. W. H. Power in a note to the report states this view emphatically, pointing out that the experience of recent years goes to show that if ordinary precautions are taken the risk of introduction and spread of plague in European ports is small and that measures for the destruction of rats in ordinary circumstances are called for only in the case of vessels on board which plague has occurred in the human being or in the rat. Where this is the case it seems from Dr. Haldane and Dr. Wade's report that satisfactory results would be obtained by first unloading the cargo with all practicable precautions to prevent the rats from escaping and then treating the empty holds with sulphur dioxide on the lines which they indicate.

A CLAIM UNDER THE WORKMAN'S COMPENSATION ACT.

AN interesting claim under the Workman's Compensation Act was heard at the Belfast Recorder's Court in November of this year. On Nov. 17th, 1903, a working baker named Neill, aged 54 years, sustained an accident in the course of his employment. In moving a bogey filled with bread the second toe of the left foot was seriously injured. The wound became septic and about a fortnight later tetanus developed. On Dec. 7th he was removed to the Royal Victoria Hospital, Belfast. The toe was amputated and antitetanic serum was injected. His life was said to have been in danger for ten days. He left the hospital on Dec. 30th. On Dec. 15th an agreement was come to between the applicant and his employer whereby the latter undertook to pay the former half his weekly wages during his total incapacity. Thus far the facts were not disputed. Compensation was paid until May 19th, 1904. From that time the respondent repudiated further obligation on the grounds, as he alleged, that the applicant had recovered from the effects of his injury and it was this issue the court had to determine. It was stated that Neill had been healthy for 30 years prior to the accident. At the trial there was considerable conflict of opinion between the medical witnesses. Professor T. Sinclair, who had the man under his care in the hospital, deposed that the action of the heart was unsatisfactory, being irregular in force and wanting in tone. "His symptoms showed an incapacity for full recovery of nervous tone and muscular strength." He thought the man was improving but that it would be a year or two before he recovered his nervous tone. Corroborative testimony was given by Mr. D. Mark, Dr. J. G. Clokey, Dr. H. F. Hanna, and Dr. T. S. Kirk. Dr. Monypeny, on the other hand, was of opinion that the man had recovered from the effects of the accident. He considered that the applicant's heart was "normal for a man of his age" and that all the symptoms of heart affection had developed since May. He believed, however, that the man would never be able to lift heavy weights. Dr. J. Walton Browne could detect no organic disease with the exception of the heart, which was "dilated and fatty" and greatly excited. If the evidence is correctly reported we are at a loss to reconcile the testimony of Dr. Monypeny and Dr. Browne as regards the state of the heart. It cannot be said that a dilated and fatty heart is the normal condition in a man aged 54 years. On one occasion when examined by Mr. Mark the knee-jerks were unequal and there was slight ankle clonus. Neill had lost a stone in weight and still complained of pain in the back and the lower extremities. In fact, his condition was diagnosed as spinal neurasthenia. Without further guidance we are not in a position to assert that the perverted action of the heart was dynamic, or symptomatic of organic disease. If it was the former we can readily understand it as one of a train of phenomena not unlikely to form a sequel in the case of a man who had undoubtedly suffered from sepsis and spinal irritation in its most acute form. The term neurasthenia, like "railway spine," is undoubtedly made to do service in support of the contention that a series of symptoms, and it may be objective signs, are conclusive of serious functional or organic disease. At the same time it shelters beneath it many instances of pretended disorder. After a careful survey of the facts in the case under consideration we feel compelled to subscribe to the decision of the learned Recorder that the applicant was still suffering from the effects and after-effects of the accident and that he was still incapacitated from carrying on his customary avocation. The rider added by the court, that the plaintiff "was not to look upon this decision in the light of a pension for life, but when able to work he must do it," was excellent. The knowledge of the fact that there is both medical and judicial warrant for a patient's belief that he is ill must not be construed as an opinion that he cannot get well. In the great majority of cases of neurasthenia if the sufferer is properly treated and helped to take a favourable view of his future, recovery ensues though possibly it may be long deferred.

THE CADGE MEMORIAL WINDOW.

ALTHOUGH the memory of Cadge of Norwich will ever be kept green in the minds of his professional brethren by his work, yet it was only fitting that his name should be perpetuated as a benefactor of his brethren by some visible memorial in the great cathedral of the city where he dwelt. Accordingly, soon after he died an appeal was made to medical men for funds for this purpose. The response was most gratifying, subscriptions being received not only from British medical men but also from many eminent continental surgeons, and it was decided that the memorial should take the form of a stained glass window. This was formally unveiled on Dec. 6th by the President of the Royal College of Surgeons of England, Mr. John Tweedy, in the presence of many medical men and members of the cathedral body. After a short office had been said Dr. M. Beverley requested Mr. Tweedy to unveil the window. This being done Mr. Tweedy delivered an oration upon the occasion which had called the company together, in the course of which he said that although it was neither the time nor the place to refer to the technical side of Mr. Cadge's career as a surgeon, yet it would not be inappropriate to notice other aspects. He reminded his audience how completely Mr. Cadge fulfilled the mediæval ideal of a surgeon by quoting from Guido de Chauliac: "The surgeon should be of kindly disposition, bold when sure, cautious

in danger, kindly to the sick, friendly with colleagues, temperate, sober, pitiful, not covetous, not greedy of gain." Mr. Cadge was always zealous for the dignity of his profession and his wide experience of life made him ever lean to the side of mercy. To know to what temptations men succumb is easy; to know those which they have resisted is difficult. Mr. Cadge was not a surgeon only; he had a full sense of his civic responsibilities and benevolence was with him a habit. Unceasingly did he cultivate the charities of life as citizen and friend, no less than as philanthropist and physician. The window was then formally dedicated by the Dean. The subject of the window is Our Lord healing the sick and it was executed by Messrs. Burlison and Grylls. Underneath it are placed two dedicatory tablets.

OVERCROWDING IN TRAINS.

DURING a Board of Trade inquiry which was held on Nov. 5th and 21st into the necessity for further workmen's trains on the London, Tilbury, and Southend Railway and the Whitechapel and Bow Railway some startling evidence was given as to the overcrowding of trains running over these companies' lines. The inquiry was held on the petition of the London County Council. Colonel H. A. Yorke, chief inspecting officer of railways, Board of Trade, conducted the inquiry for the Board of Trade, while Mr. Dickens, K.C., and Mr. Corrie Grant appeared for the London County Council. The railway companies were represented by Mr. W. J. Noble. Observations had been made by the London County Council inspectors many times of the overcrowding and the result showed that things were now worse than ever. In one of the trains it was impossible to count the passengers accurately. The figures for this train showed that with accommodation for 942 passengers about 1680 passengers were carried. Mr. Dickens argued that by a rearrangement of the times of the trains it was possible to make additions to the service. There was a crying need for improvement. Evidence was given by residents at East Ham, Manor Park, Plaistow, Canning Town, and Upton Park, whose evidence all went to show that the overcrowding was terrible. We understand that Colonel Yorke will make his report to the Board of Trade in due course and when that is done we hope to see some practical benefit arise from the petition of the London County Council which, we are glad to see, is awake to the necessities of saving a section of Londoners from sufferings comparable only to those of some of the poor wretches who used to be confined under the hatches in the Arab slave dhows. We trust the day of emancipation may soon dawn and that it will not be said that though a company may not suffocate and squeeze a man to death in the daylight on the highway it may do so with impunity when it gets him underground in the dark.

THE HOSPITAL ISOLATION OF SCARLET FEVER.

THE isolation of scarlet fever patients in special hospitals, whether such isolation be voluntary on the part of the family or enforced against their will, involves a multiplicity of debateable questions, some of which have been frequently referred to in THE LANCET. In our issues of August 27th (p. 624) and Nov. 5th (p. 1297), 1904, we recapitulated some arguments which have been of recent years urged against the system. We did not in these articles attempt to cover the whole ground and did not trace the opposition further back than a notice of a pamphlet by Mr. E. D. Marriott of Nottingham and letters of his published in THE LANCET of December, 1900. We have now, however, received a letter from Dr. F. Lucas Benham of Campden House, Exeter, South Australia, who, after referring to the above-mentioned article of August 27th, says that he has for a number of years interested himself in this question of isolation and reminds us that in THE LANCET of June 13th, 1896, p. 1672—

> You will find a letter from me on "Isolation and the Public Health Act," in which I think I anticipated even Mr. Marriott in contending that the necessity for public hospitals for infectious diseases (at any rate, scarlet fever and diphtheria) was far from being proved. My main propositions were: (1) fever hospitals are not conducive to the speedy recovery of such patients or to the absence of complications; (2) removal of scarlet fever patients does not lessen the prevalence or the spread of the disease; (3) maintenance of non-indigent patients at the public expense is an unjust burden on the ratepayers; (4) most cases of scarlet fever arise from infection by slight and unnoticed cases. In your issue of the following week (June 20th, 1896) Mr. W. Berry, medical officer of health of Wigan, wrote a letter in my support, and not long afterwards (in the same year) Mr. Marriott of Nottingham also entered the field on the same side. I have always read his letters on the subject with great interest and I have applauded the energy with which he has continued the attack. It is satisfactory to find that there is likely to be a public inquiry into the matter, with some prospect of reform.

Dr. Benham when he wrote to us in 1896 was practising in Elizabeth-street, London, S.W. We may be allowed to add to the foregoing that in our issue of Oct. 23rd, 1897, p. 1040, Mr. Arthur Wiglesworth of Liverpool published under the heading of "Isolation in Scarlet Fever Unnecessary and Inexpedient" a long paper which he said "was read before the Liverpool Medical Society nearly four years ago."

"EKIRI," AN EPIDEMIC FORM OF INFANTILE DIARRHŒA IN JAPAN.

VARIOUS views have been expressed by Japanese physicians as to the pathogenesis of "ekiri," an acute and fatal form of epidemic diarrhœa. By some it has been regarded as a variety of acute epidemic meningitis, since the disease is usually associated with cerebral symptoms, especially in young children; by others it is regarded as a severe form of dysentery occurring in childhood and due to the bacillus of Shiga. Recently it has been regarded as acute follicular enteritis. An interesting account of the disease with records of bacteriological investigations is given by Dr. Sukehiko Ito of Fukuoka, Japan, in the *Archiv für Kinderheilkunde*, 1904, Band 39. The incubation period he estimates at from 12 to 24 hours from a careful study of 21 cases; this is followed by a prodromal stage and a fastigium. The characters of the prodromal stage are as follow. A previously healthy child evacuates copious loose offensive stools often admixed with undigested food and sometimes with a small quantity of mucus. The general condition of the child is depressed and the temperature rises to from 38° to 39° C. Occasionally abdominal pain and vomiting occur. In the fastigium the fever increases and the character of the stools changes to a watery mucus; the abdomen has a soft doughy feel. Later cerebral symptoms develop, unconsciousness with severe general tonic-clonic spasms being not infrequently followed by deep coma. The course of the disease is almost invariably acute and very frequently fatal. Recently an improvement in the recovery rate has occurred, but even now at least one-third of the children attacked by the disease succumb to it. Dr. Ito has isolated an organism from the stools of patients suffering from the disease which he regards as the pathogenic agent and to which he has given the name of the ekiri bacillus. Its microscopical features are closely similar to those of the bacillus coli communis. It is pathogenic for mice, guinea-pigs, rabbits, fowls, and pigeons, and it agglutinates with the serum of patients who have recovered from the disease and with that of animals immunised to it. It is not found in healthy people but only in cases of ekiri. The features of this disease seem to be very similar to those of the epidemic summer diarrhœa or cholera infantum of our own large towns and the cerebral symptoms are doubtless analogous to those occurring in that disease, and to which Marshall Hall applied the name of hydrocephaloid. The observations are of interest in this connexion, as if the ekiri bacillus prove on further investigation to be the cause of this disease in Japan, as the Shiga and Flexner bacilli have in other cases elsewhere, the differentiation of the

causal agent in cases of epidemic diarrhœa may become a matter of importance in relation to treatment, since apparently it is possible to immunise animals to the disease.

HAIR-BALLS IN A CHILD AGED FIVE YEARS.

IN the stomach or intestines of animals, such as the cow, which habitually lick the hairy surface of the skin it is not by any means rare to meet with masses of hair which have been formed by the aggregation of the numerous hairs swallowed. The churning action of the stomach felts these hairs together until rounded masses are formed which may attain a large size and ultimately may lead to intestinal obstruction. These hair-balls are rare in human beings and then generally occur in girls or women, especially in those of weak or unsound intellect. A case was reported in June of this year to the Société de Pédiatrie of Paris by Dr. Zuber, in which a boy of the age of five years passed three hairy masses. His history showed that he was breast-fed to the age of 12 months and had never had any digestive troubles. When he was between five and eight months old the child had developed the habit of pulling out his hair, so that at last he had only a tuft at the back of his head, and so his mother made him wear a cap continuously to cure him of the habit. He soon lost this trick and when seen he had a good head of hair. For a few weeks before he was seen he had suffered from colic with frequent and glairy motions and a slight feverishness. Abdominal palpation revealed nothing. After this attack had lasted some days he passed a blackish mass of hair which the mother threw away. Three weeks later he passed three small masses of hair and after that the diarrhœa ceased completely. The masses consisted of felted hairs, each hair being from three to five centimetres in length. The masses were of the shape of ordinary formed fæces. It appears probable that these ægropiles, as they have been called, had remained in the stomach or intestines from the first year of life when the boy was in the habit of pulling out his hair. It is of interest to note that his elder sister up to the age of two years was in the habit of eating pieces of wool which she pulled from her blankets and her mother had often found little woollen masses in the stools. This child, another sister, and the patient were all in the habit of chewing grass and paper, and the patient himself when two years old used to eat earth.

THE EVOLUTION OF MAN'S DIET.

A CORRESPONDENT writes: "The interesting and important history of the gradual development by the human race of the capability to utilise the various products of nature for the purpose of food, as set forth in the columns of THE LANCET by Dr. Harry Campbell, appears to have been a matter of tradition, doubtless for many centuries transmitted orally from generation to generation, among the early Hellenes, for more than one Greek poet has referred to it. A fragment of an elegiac poem found recently upon an Egyptian papyrus affords an instance of this. The poet is praising the happiness of humanity in primitive times when living in a state of nature previously to any serious competition for existence. The translation of the text, owing to some letters being obliterated, is extremely difficult and the following rendering is based upon that of the celebrated French Hellenist M. Weil:—

> When mortals exchanged an easy life for one of labor's durance. They were about as senseless as was Glaukos, the Lycian, when he eagerly, the thoughtless one, accepted a suit of armour worth nine oxen in exchange for one valued at 100. Beforetime they forged not a pick n'or massive hatchet, n'or hoe, with two sharp teeth, in order to work; like a quarryman who pierces the mountain; to turn over the flinty earth. They cast not the grain into the furrow. They labored not with oxen the fallow land, gift of the Nile. Without work they possessed the oaks produced by the soil, and the acorns, man's most primitive food.

The author of the work from which these lines are preserved is unknown, but he was probably some cynic poet of Alexandria repeating the theories of Antisthenes and Diogenes. A far more elegant piece of literature upon the subject is contained in a little known fragment of Euphorion, to be found in the celebrated Didot edition of the shorter remains of lost classics, a portion of which runs as follows. It will be seen that the picture is not so idyllic as that given in the former quotation.

> 'There was a time when mortals lived like brutes
> In caves, and unsecured hollows of the earth.
> For, neither house n'or city, flanked with towers,
> Had then been reared. No ploughshare cut the clod
> To make it yield abundant harvest; n'or
> Were vines ranked and trimmed with pruning knives,
> But fruitless births, the sterile earth did bear.
> Men on each other fed, with mutual slaughter.
> For law was feeble, violence enthroned;
> And to the strong the weaker fell a prey.'

The poet then describes the beginning of agriculture. Hesiod, as is well known to those who remember their classics, speaks of the gradual progress of humanity in much the same terms, though to him the best and golden age was ever that of the highest antiquity, and he considers things had altered decidedly for the worse. Speaking of man cultivating the soil and goading the ox at the plough as 'sweating under the labour by the gods imposed upon mankind,' some lines of his almost show us the Pelasgians, having entered Greece, changing from a hunting, or pastoral, into an agricultural people—

> 'Who settled near by the sea,
> Or in the vale far from its foaming waves;
> And at the foot of the gloomy ravine
> Turned up the fruitful soil.'"

ANIMAL MEMBRANE IN THE TREATMENT OF GRANULATING WOUNDS.

Dr. Frederic Griffith of New York City recently read a paper before the Surgical Section of the New York Academy upon the healing of granulation wounds. Granulation, he says, is a mere excess of that which takes place after agglutination in a coapted incised wound and the process of granulation is somewhat as follows. "Until the end of 24 hours the various tissues can be distinguished, later the outline is obscured by the gelatinous lymph and by a process of fatty degeneration, the blood coagulum being entirely replaced. About the third day the wound cleft is found to be made up almost entirely of round cells, some intermediate substance, and the remains of the blood coagulum. Later come large epithelioid cells, being forerunners of granulation tissue formation and fibroblasts which change into the fibres of the fibrillar connective tissue. Some of these newly-formed cells become wandering cells and regeneration within the new formed tissue mass is likewise carried on by the fixed tissue cells. ..... The factor which above all else determines wound healing is the presence or absence of friction or, taken in its broadest sense, irritation." Dr. Griffith went on to say that oil-silk or rubber tissue being waterproof when applied to a wound formed an ideal nidus for germs; even if rubber tissue were applied shingle fashion the fact remains that rubber is not an animal tissue and so cannot react to the progressive changes of regeneration in the wounded tissues. The use of the peritoneum of the ox, known as Cargile membrane or, on this side of the Atlantic, gold-beaters' skin, marked, in Dr. Griffith's opinion, an epoch in the treatment of granulating wounds and the main object of his paper was to draw the attention of his audience to another animal membrane—namely, the "gastro-intestinal mesenteric attachments of the sand shark, *carcharias littoralis*." An ordinary sized fish would supply two or three square feet of this almost gossamer but tough material which, even when kept in alcohol for ten weeks, underwent no apparent change but an increase in toughness. The membrane was transparent. It might be worth while for

English surgeons to make a trial of a similar material in lieu of gold-beaters' skin which has been used and doubtless plenty could be secured from the dog-fish which are now so abundant off the Cornish coast.

DR. DOYEN AND CANCER RESEARCH.

IN January, 1902,[1] it may be remembered, our Paris correspondent was able to report that the French Academy of Medicine had been considering a paper laid before it by Dr. Doyen, in which that eminent surgeon announced the constant presence in cancerous tumours of a new microbe which he had been able to isolate and cultivate. Subcutaneous injection of the toxin of this microbe, attenuated in a special manner, he found to bring about a reaction similar to that produced in tuberculous glands by tuberculin, but further information as to his methods was not at that time made public, Dr. Doyen himself agreeing that the results of post-operative injection of the toxin must be tested and confirmed. A special meeting of the French Society of Surgery was held on Wednesday night last at which a report was read signed by Professor Metchnikoff and other independent observers. This report is understood to have been in certain directions favourable to Dr. Doyen's claims, but it is unnecessary to remind medical men that this does not imply, as the lay papers would have the public believe, "the discovery of the bacillus of cancer." The pathological research of the past two years has been directed mainly to discovering in developmental defaults the essential reason of malignant disease, so that Dr. Doyen's work, when it can be made public with sufficient detail to enable our readers to appreciate it, will appear at a very interesting time.

THE HYGIENE OF HAIRDRESSERS.

WE have on a previous occasion drawn attention to the many dangers which lurk in the methods of hairdressing and shaving as ordinarily practised. We also mentioned that the medical officer of the Corporation of the City of London was endeavouring to obtain the sanction of the corporation to the laying down of regulations for the more hygienic management of hairdressers' establishments. We have received a copy of the rules which it is intended to introduce. They have been drawn up by the Incorporated Guild of Hairdressers, Wigmakers, and Perfumers, in conjunction with the medical officer of health of the City of London. We have already mentioned the chief points in these rules and now need only repeat that they form an attempt to limit as much as possible the transference of germs from the hairdresser to his clients or from one client to another. The scissors, razors, combs, clippers, and shaving brushes have to be placed in a disinfecting solution after use; no suggestion is given as to the time during which they are to remain in the disinfecting solution, though this is naturally of great importance. The disinfectants recommended are cyllin solution in the proportion of one teaspoonful of cyllin in one quart of water, or izal solution in the proportion of one teaspoonful of izal in one pint of water. We welcome this excellent attempt to introduce hygiene into a business where it was unknown previously, so far as concerns this country at least. Doubtless time will show many points in which experience will suggest improvements, but the Corporation of the City of London and its medical officer, Dr. William Collingridge, deserve great credit for the action which they have taken.

THE medical officer of health of Cape Colony states that for the week ending Nov. 19th the conditions as regards plague in the colony were as follows. At Port Elizabeth four cases were discovered during the week—namely, two European males and two native males. Plague-infected rodents were also found. At East London plague-infected rodents were found. In the Cape Town district, including the harbour and the shipping, 1052 rodents were examined but none was affected with plague. In other districts no case of plague in man or animal was discovered. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on Dec. 10th states that for the week ending Dec. 8th there were 25 cases of plague and 14 deaths from the disease.

Sir Oliver Lodge, in a note read before the Royal Society at the meeting held on Dec. 8th—on a Means of Producing a High-voltage Continuous or "Pertinacious" Current—has hinted at a method of storing the intermittent high potential discharges of a Ruhmkorff coil in reservoirs whence they can be discharged continuously through any high resistance. We hope that when details of the method are made known it may be found useful in certain medical applications of electricity, as, for instance, in x ray work, and to replace statical machines in treatment.

THE next ordinary meeting of the Royal Meteorological Society will be held at the Institution of Civil Engineers, Great George-street, Westminster, S.W., on Wednesday, Dec. 21st, at 7.30 P.M., when the discussion will be taken on Mr. F. J. Brodie's paper, Decrease of Fog in London during Recent Years, and the following paper will be read: The Study of the Minor Fluctuations of Atmospheric Pressure, by Dr. W. N. Shaw and Mr. W. H. Dines.

NEWS has been received from Melbourne of the death on Dec. 10th of Dr. D. Astley Gresswell, chairman of the Board of Public Health of Victoria. Dr. Gresswell belonged to a Lincolnshire family and graduated at Oxford as M.B. in 1881 and M.D. in 1889. He was also admitted M.D. Melb. in 1890.

AT a meeting of the Royal Microscopical Society to be held at 20, Hanover-square, London, W., on Wednesday, Dec. 21st, at 8 P.M., Mr. J. W. Gordon will read a paper on the Theory of Highly Magnified Images.

Lord Rayleigh, with great generosity, proposes to present to the University of Cambridge the amount of the Nobel prize for physics which has just been awarded to him.

THE Right Hon. Joseph Chamberlain, M.P., will preside at a banquet in London on May 10th next on behalf of the London School of Tropical Medicine.

SOCIETY OF CHEMIST OPTICIANS.—The opening meeting of this society was recently held in the lecture theatre of the Pharmaceutical Society, Mr. C. J. Garibaldi Bunker, the president of the society, being in the chair. A lantern lecture was delivered by a gentleman who had made discoveries when in Australia, where he had ascertained statistically that at one of the State schools nearly 70 per cent. of the children had defects of vision. Mr. A. Higgs moved a vote of thanks, in the course of which, if we may trust the printed report which lies before us, he said that medical men knew little about eye-testing. The motion was formally seconded by Mr. Julius Cæsar and passed with acclamation. Mr. Garibaldi Bunker, Mr. Higgs, and Mr. Julius Cæsar evidently intend to make war upon the medical profession.

[1] THE LANCET, Jan. 11th, 1902, p. 128.

THE STATISTICAL REPORT ON THE HEALTH OF THE NAVY FOR 1903.

THE report on the health of the Royal Navy for 1903, which has been issued recently, is a very satisfactory one. The total force serving afloat, corrected for time, in that year was 103,100. With an increased *personnel* of 3500 as compared with the previous year there are decreases in the ratio of cases, invalidings, and deaths both as contrasted with the previous year and with the average for the last six years. Taking the total death-rate, by way of a notable example, it is 4·19 per 1000, which is the lowest for nearly 50 years—namely, since 1856; that from disease alone during 1903 was only 2·79, which is 0·72 less per 1000 than for the preceding year. Only two wounds in action are recorded with one death which occurred on the East India station when the *Mohawk* landed a force to punish the chief of the village at Durbo, in the Italian Somaliland. The aggregate number of cases of disease and injury recorded in 1903 furnishes a reduced ratio of 831·57 per 1000. All the stations show a reduction in the ratio of cases per 1000 of force except the South-east Coast of America, Cape of Good Hope and West Coast of Africa stations, where the results do not show altogether so favourably in this respect. The highest invaliding rate was on the North American and West Indies station and the highest death-rate was in the East Indies. The invaliding ratio of the total force (24·03 per 1000) shows a decrease of 5·93 as compared with 1902, also a decrease of 6·94 in comparison with the average for the last six years.

There were only three cases of small-pox in 1903. The cases of enteric fever show a slight increase of 0·15 per 1000, but the deaths during the year were fewer by seven than in the preceding year. Ten cases of plague are recorded as having occurred on the China station, none of which proved fatal. There was only one case of cholera. Among the general diseases we may also notice, without going any further into the results of the statistical calculations set forth in the report, Mediterranean fever, malarial fevers, dysentery, septic diseases, tubercle, and venereal diseases as being among the main contributions to the totals. The Mediterranean station showed the lowest sick-rate and the irregular force the highest. There were 17,295 cases of wounds and injuries and 129 deaths. The fatal cases are classified under different heads according to the various causes to which they were attributable—such as burns and scalds, heat-stroke, multiple injury, drowning, and so forth. The local injuries furnished 15,605 cases. 16 men committed suicide. A table (No. 4) in the medical statistical returns of the total force shows the ratio per 1000 of force of all classes of disease and injury entered on the sick list as well as of the invaliding and mortality from the different classes of disease and injury on the various stations during the year.

With regard to the remarks on the various stations we can only refer to a very few. We may say that the report for 1903 strikes us as being on the whole one of the best annual reports of the series, especially as regards the papers published in its appendix. Under the heading of the Mediterranean Station, in the remarks on influenza a brief history is given of the epidemic in connexion with H.M.S. *Diana*, followed by other short statements in regard to enteric, Mediterranean, and malarial forms of fever. On the South-east Coast of America station (now called the South Atlantic station), where the mean strength of the force was relatively small and where there was a considerable amount of sickness in 1903, the increase in the case ratio is mainly to be accounted for by an outbreak of enteric fever and simple continued fever in the *Cambrian*, and the surgeon of that vessel gives a brief history of the circumstances and causes of this outbreak. It may be remarked that, in spite of this occurrence, there was nevertheless a great decrease in the invalidings as compared with the previous year. The remarks under the headings of the other stations—those of the Cape of Good Hope and West Coast of Africa, East Indies, China, and Australia for instance—are brief, pertinent, and explanatory of the facts.

The appendix to the report with its accompanying charts covers about 80 pages and contains 14 separate papers dealing with subjects of much interest to medical officers of the public services and to students of tropical and subtropical diseases, especially with those diseases prevailing at Malta and in the Levant. All these contributions are worth reading; some of them consist of exhaustive inquiries and observations, and a few are of much scientific and clinical value as recording the results of good work independently undertaken in these directions.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held on Dec. 8th, Sir W. S CHURCH, Bart., the President, being in the chair.

The PRESIDENT announced that he had nominated Dr. G. R. Murray to be the Bradshaw lecturer for 1905.

The following Fellows were, on the nomination of the PRESIDENT, elected to attend as delegates of the College at the Conference of the Sanitary Institute on School Hygiene in February next: The President and Sir Lauder Brunton.

The following communications were received:—

1. From the secretary of the Royal College of Surgeons of England reporting the proceedings of its Council on Nov. 10th.

2. From the secretary of the Royal Commission on the Care and Control of the Feeble-minded. After a brief discussion, in which Dr. FLETCHER BEACH, Sir W. R. GOWERS, and the PRESIDENT took part, it was resolved to appoint a committee to report upon the answer which should be returned to the communication of the Commission. The following Fellows were elected to serve on the committee, the President, Dr. Fletcher Beach, Dr. Sidney Coupland, Dr. H. G. Savage, Dr. D. Ferrier, Dr. W. J. Mickle, and Dr. C. A. Mercier.

3. From the Clerk of the Privy Council, forwarding, by direction of the Lord President, a note received from the Portuguese Legation, expressing the desire of their Government that the British Government should be represented by special delegates at the International Congress on Medicine to be held at Lisbon, April 19th to 26th, 1906. The nomination of the delegates was postponed.

4. From Dr. W. R. Smith, President of the Royal Institute of Public Health, inviting the College to send delegates to a congress of the institute to be held in London, July 19th to 25th, 1905, with special reference to school hygiene. After some discussion it was unanimously resolved that the communication lie upon the table.

The REGISTRAR moved that on the occasion of the examination for the Membership in April, 1905, the regulation appended to by-law cxv. be suspended. This regulation requires that the examination should commence on the last Tuesday but one in April—i.e., on the 18th in 1905—but as this would bring the meetings of the censors' board into Easter week by the adoption of the above proposal the examination will now begin a week earlier—viz., on April 11th.—The proposal was adopted.

ASYLUM REPORTS.

London County Asylum, Claybury (Report for the Year ending March 31st, 1904).—The average number of patients resident during the year was 2398, comprising 994 males and 1404 females. The admissions during the year amounted to 607—viz., 296 males and 311 females. Of these 546 were first admissions. Dr. Robert Jones, the medical superintendent, states in his report that the number of admissions and the total number under treatment have been higher than in any of the previous five years. The transfer of male epileptics to the epileptic colony at Ewell has removed from Claybury all the outdoor working epileptic patients. Of the 607 patients admitted over 20 per cent. were more than 60 years of age. "I think," adds Dr. Jones, "that the stresses of life which become each year more exacting without a corresponding physical improvement are responsible for much presenile insanity or a premature mental breakdown at the critical periods of life. Senile insanity is a chronic and helpless form of insanity, full of trouble and anxiety to those responsible for its treatment. It is more marked than any other by accidents and by the slighter forms of casualties, which disturb the confidence of the friends and which occur in spite of the

most constant and careful supervision." General paralysis occurred in 14·5 per cent. of the men and 4·8 per cent. of the women admitted. The prevailing form of insanity was more of the depressed than of the excited type and there were among the men three times the number of acute cases of melancholia as compared with corresponding cases of mania. Of the causes of insanity previous attacks were responsible as a predisposing cause for 25 per cent. of the admissions. Hereditary influence was ascertained in a similar proportion of cases and alcohol as a direct or indirect factor also figured highly. "Alcohol affected the well-being of others besides the patients, for 70 per cent. of the men and 30 per cent. of the women had families dependent upon them, and of the men in this class 30 per cent. were skilled handicraftsmen." The number of patients discharged as recovered during the year amounted to 193—viz., 84 males and 109 females, or 8 per cent. of the average number resident. The deaths during the year amounted to 198, or 8·2 per cent. as calculated on the same basis. Of the deaths five were due to senile decay, six to epilepsy, 18 to pneumonia, 21 to dysentery, 26 to pulmonary and other forms of tuberculosis, 32 to cardiac disease, 45 to general paralysis of the insane, and the rest to other causes. Six females admitted whilst pregnant were delivered of infants in the asylum. Four of the mothers recovered sufficiently to be discharged. No suicides occurred during the year. The Commissioners in Lunacy state in their report that the wards and dormitories were in excellent order, that the bedding was in good condition, that the condition of the patients was satisfactory as regards dress and personal appearance, and that the medical records and case-books were well kept. "The result of our thorough inspection of this large asylum," add the Commissioners, "is that we are well satisfied with its management and the treatment of the patients, which reflects credit upon Dr. Jones, the medical superintendent." The expenditure on repairs, alterations, and improvements amounted during the year to £9202.

London County Asylum, Cane Hill (Report for the Year ending March 31st, 1904).—The average number of patients resident during the year was 2124, comprising 917 males and 1207 females. The admissions during the year amounted to 382—viz., 189 males and 193 females. Of these, 361 were first admissions. Mr. James M. Moody, the medical superintendent, states in his report that the admissions continue to be of an unfavourable type. "A large proportion of the cases were of a hopeless character and many were in an exceedingly feeble condition, several succumbing within a short period after admission." Two patients admitted whilst pregnant were each safely delivered of a female child. One of these patients has since been removed to another asylum. The chief causes of insanity have been predisposition from previous attacks, domestic trouble, and worry or adversity, alcoholic intemperance, and heredity, in descending order of frequency. The number of cases discharged as recovered during the year amounted to 120—viz., 51 males and 69 females, or 5·6 per cent. of the average number resident. The deaths during the year amounted to 137, or 6·4 per cent. as calculated on the same basis. Of the deaths, six were due to cancer, eight to renal disease, 13 to pneumonia, 14 to pulmonary and other forms of tuberculosis, 18 to cardiac disease, 29 to general paralysis, and the rest to other causes. Four inquests have been held during the year, a verdict of "Death from natural causes" being returned in each case. The general health of the inmates has upon the whole been good and the death-rate is the lowest recorded since the opening of the institution. "In the early part of the year influenza appeared. In the female division it was of a somewhat virulent character, several cases terminating fatally through pneumonia. On the male side the complication was intestinal but in no case did death ensue." The Commissioners in Lunacy had not visited the asylum during the year under review. The committee of management states in its report that in connexion with the arrangements for dealing with an outbreak of fire the following measures have been carried out. The connecting of the East Surrey Water Company's main with that of the asylum has been completed and the pressure of the augmented supply is sufficient to carry water over the highest building when all the usual services are in use. The fire-alarm system has been extended to include the cottage hospitals, the garden, and farmhouses. Upon representation being made to the Croydon rural district council it has fixed at its expense a fire-hydrant on the East Surrey Water Company's mains for the better protection of the attendants' cottages. The farm account shows a credit balance on the year's working of £395. The expenditure for repairs, alterations, and improvements during the year amounted to £6518.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Dec. 16, 1826.

To the Editor of THE LANCET.

SIR,—When candidates pass their examination at the Royal College of Surgeons, I believe they make oath to preserve the honour and dignity of the profession, &c.; and if I recollect right, for any egregious violations of its decency and decorum, they subject themselves to be struck from the list of its Members. Now, if this be the case, what does it not argue for the active *surveillance* and *watchfulness* of those honourable and upright gentlemen who compose the present Court of Examiners. I repeat, what does it not argue, when we see blazoned forth in every newspaper, the nauseous and disgusting paragraphs of those *quacks* in Bouverie Street, Bridge Street, Adelphi, Norfolk Street, &c., styling themselves *Members* of the *Royal College of Surgeons*.

Is it not a disgrace to be in any way connected with such a body? The question is an idle one—as the *thing* is at present constituted, we know that it is, and we also know that there is little hope of reformation.

I am perfectly aware, Mr. Editor, that what I have here complained of, will, (as we say at school,) long ere it reach *Olympus*, be scattered in empty air—but there is yet another saying, which may apologise for this intrusion, "Gutta cavat lapidem."

I am, Sir,
Your very obedient servant,
A. Z.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Dec. 8th, Mr. JOHN TWEEDY, the President, being in the chair. The secretary reported the death, on Oct. 20th, of Professor Paul Tillaux of Paris, Honorary Fellow of the College.

Diplomas of Fellowship were directed to be issued to 29 successful candidates. It was resolved that diplomas in dental surgery should be issued to 40 successful candidates. In response to a petition from 264 dental students and in accordance with a recommendation from the Board of Examiners in Dental Surgery it was resolved that a syllabus of anatomy, physiology, and surgery should be issued, and the Board was requested to prepare such a syllabus. A report was received from the Committee appointed to consider the proposed system of school certificates; this was adopted and it was resolved that an answer should be sent expressing general approval of the scheme.

Mr. Bernard Pitts was re-elected a member of the Court of Examiners.

The resolutions carried at the annual meeting of Fellows and Members were reported to the Council. With regard to the first resolution a discussion was held and it was ultimately resolved that the further consideration of the matter should be postponed, and that the mover and the seconder of the resolution should be informed of this, and that the result of the further consideration would be communicated to them in due course. With regard to the second and third resolutions it was considered that they did not call for any answer from the Council.

A letter was read from Dr. Norman Moore, reporting on behalf of Mr. Henry Morris the proceedings of the General Medical Council at its late session in regard to matters of interest to the College. The best thanks of the Council were given to Dr. Norman Moore for the services kindly rendered by him to the Council in the absence of Mr. Henry Morris.

The PRESIDENT reported the delivery of the Bradshaw lecture by Mr. A. W. Mayo Robson, the subject of the

lecture being Cancer and its Treatment. The best thanks of the Council were given to Mr. Mayo Robson for his lecture and he was requested to publish it.

The PRESIDENT reported that he had unveiled a window in Norwich Cathedral erected in memory of the late Mr. William Cadge, F.R.C.S.

MEDICINE AND THE LAW.

Medical Men and the "Police Call."

A CORRESPONDENT asks "whose duty it is to see that the medical practitioner is paid in the case of a police call," and further inquires "whether the police are justified in referring the medical man to the patient's friends or relatives for payment." He suggests that it is the duty of the police "to forward a certificate for the payment of the fee to the medical practitioner called" and that even if the relatives undertake the payment of the fee it is not for the medical man to undertake the collection of it. The question of who is to pay the medical practitioner who at the instance of the police attends to a person in need of his aid is one which often arises and from the point of view of the medical man it is unjust that he should be summoned, perhaps from his hardly earned rest, to attend upon a patient who either will not be able to pay him or who will deny his liability to do so and at the same time to find that the police authorities also refuse to acknowledge the debt as theirs. It is a hardship and it is one for which it is not easy to suggest a remedy unless medical men sitting upon the local bodies which control the funds placed at the disposal of chief constables see their way to devise one and to carry it into practice. The legal position can be best appreciated by imagining a concrete case. A policeman on his beat finds a tramp apparently dying from disease or from a serious wound in the road 100 yards from the house of a medical man and a mile or two from the nearest hospital or workhouse infirmary. If the policeman leaves the man to die without summoning medical aid he will be censured, perhaps by medical men, for his inhumanity. He, however, goes to the house of the practitioner who lives close by and asks him to come. The medical man may either go at once without question or he may consider these points. The tramp will not be able to pay him and his relatives, if they can be found, will probably refuse to do so and cannot be compelled to accept the liability. They certainly do not summon him or enter into any undertaking to remunerate him. The policeman calls on him to attend but the policeman is not authorised to pledge the credit of his superior officers or of the fund out of which he draws his pay for the supply of medical aid to persons, tramps or otherwise, found in need of it upon the highway. The policeman is not offering to make himself personally liable and if asked definitely to do so would naturally decline. It is doubtful also whether the persons intrusted with the finance of the police force would legally be justified in spending money with such an object. The police, incidentally to their duties in preventing or detecting crime, summon the medical man in order to save a life apparently in danger or to allay suffering. The medical man, incidentally to his profession, from which he earns, or endeavours to earn, a living, is called upon to exercise his professional skill without hope of reward or with but scanty expectation of any adequate remuneration. If he refuses to go his neighbours, should they hear of it, will say hard things of him, as they would have done of the constable if he had failed "to call a doctor." If he goes they probably will hear nothing of the matter and he will, almost certainly, have performed a charitable act without thanks from anyone, for even the person relieved may be expected to evince no gratitude towards him. The situation is an extremely unpleasant one, for those who do charitable acts in other spheres of life at least can choose the objects of their benevolence. There is, however, as a matter of fact, great difficulty in suggesting a remedy which local authorities are likely to put into practice, and the response, made gratis, to the "police call" seems likely to remain among the deeds of kindness done by the medical profession, to their own cost in time and labour, not only without any reward or compensation but without praise or congratulation. The average member of the public would say of the medical man in the circumstances imagined, "Of course he goes; he would be a callous brute if he did not." He does not reflect, however, on what his own feelings would be if he were expected suddenly to exercise his own profession or business at any hour of day or night on behalf of a needy stranger who would probably be found ungrateful and undeserving. Whatever remedy, however, anyone may be able to suggest for the existing state of things, it is certain that at present it is not anyone's "duty to see that the medical practitioner is paid." We would that it were so.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: E. H. Meaden to the *Fire Queen*, additional, to be lent to the *Apollo* and then to the *Brilliant*; and J. C. F. Whicher to the *Brilliant* on recommissioning.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. R. Mallins, retires on retired pay (dated Dec. 14th, 1904). Lieutenant F. H. Noke is confirmed in his rank.

INDIAN MEDICAL SERVICE.

The King has approved of the retirement from the service of the undermentioned officers:—Lieutenant-Colonel Frederick Robert Swaine (dated Nov. 1st, 1904) and Lieutenant-Colonel Shibram Borah (dated Sept. 10th, 1904).

IMPERIAL YEOMANRY.

Middlesex (Duke of Cambridge's Hussars): Herbert Meggitt to be extra Surgeon-Lieutenant under paragraph 30 Yeomanry Regulations (dated Nov. 26th, 1904).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain W. B. Cockill to be Surgeon-Major (dated Nov. 26th, 1904); Surgeon-Captain T. E. Stuart to be Surgeon-Major (dated Nov. 26th, 1904).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Cornwall (Duke of Cornwall's): Surgeon-Captain R. G. Nesbitt to be Surgeon-Major (dated Dec. 10th, 1904). 1st Lanarkshire: Surgeon-Lieutenant-Colonel J. Provan retires under paragraph 103, Volunteer Regulations, and is granted the honorary rank of Surgeon-Colonel, with permission to wear the prescribed uniform (dated Dec. 10th, 1904). *Rifle:* 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment): Surgeon-Lieutenant J. A. Angus to be Surgeon-Captain (dated Dec. 10th, 1904). 4th Volunteer Battalion the Royal Fusiliers (City of London Regiment): Supernumerary Surgeon-Major (Brigade-Surgeon-Lieutenant-Colonel) W. D. Waterhouse (Senior Medical Officer, 2nd London Volunteer Infantry Brigade) to be Surgeon-Lieutenant-Colonel (dated Dec. 10th, 1904). 2nd Volunteer Battalion the Loyal North Lancashire Regiment: Surgeon-Lieutenant F. Robinson resigns his commission and is appointed Second Lieutenant (dated Dec. 10th, 1904). 13th Middlesex (Queen's Westminster): The undermentioned officers resign their commissions:—Surgeon-Captain B. L. Stivens (dated Dec. 10th, 1904) and Surgeon-Captain J. S. Hudson (dated Dec. 10th, 1904). 18th Middlesex: Surgeon-Major C. Godson to be Surgeon-Lieutenant-Colonel (dated Dec. 10th, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Glasgow Companies: Lieutenant J. Bruce to be Captain (dated Dec. 10th, 1904). Lancashire Fusilier Bearer Company: Surgeon-Captain R. Mitchell to be Surgeon-Major (dated Dec. 10th, 1904).

THE TIBET MISSION.

Mentioned in Despatches.

Major A. R. Aldridge, R.A.M.C., Lieutenant-Colonel L. A. Waddell, C.I.E., I.M.S., Major C. N. C. Wimberley, I.M.S., and Captain T. B. Kelly, I.M.S., are mentioned in a despatch relating to the Tibet expedition published in the *London Gazette* of Dec. 13th. The document contains the following paragraphs: "The peculiar climatic and physical conditions threw an additional strain on the medical department. But all requirements were met and the force maintained in good health throughout the operations.

The total number of deaths and men invalided, excluding war casualties, was 411 and 671 respectively, and of these numbers 202 and 405 were more or less due to the special climatic conditions. In addition to the above 160 wounded from among our forces had to be cared for, exclusive of a large number of Tibetan wounded who also received medical attendance. That everything worked so well reflects great credit on this department." ..... "The work which fell to the troops had to be carried out in the face of physical difficulties which subjected them to the severest hardships and privations, and these became increasingly acute as they neared their destination. Notwithstanding these difficulties, supplemented as they were by armed opposition, the undertaking was carried through in so successful a manner as to constitute it a highly creditable achievement."

DRINKING WATER FOR SAILORS.

During the last few years, says Dr. Le Méhauté in the *Archives de Médecine Navale* for September, naval hygiene has made great progress and considerable amelioration has taken place in everything that concerns the well-being as well as the health of the men who have to pass the greater part of their time afloat. Among the questions which chiefly occupy the attention of sanitarians that of potable water stands in the front rank. The purity of drinking water is important on land but it is still more so at sea where nothing is more intimately connected with the efficiency and freedom from disease of a ship's company than the water-supply. When an epidemic due to impure water breaks out in a town or village the inhabitants can adopt those measures which seem good to them individually for the protection of themselves and their families. There are many courses open to them, including the radical one of flight, but afloat those who are exposed to the infection can do but little. If the water-supply on board a ship should unfortunately become contaminated the health of the entire crew is endangered. The men have no means of safeguarding themselves. For this reason it is of the first necessity that the water provided for drinking purposes at sea should be fresh and limpid, pleasant to the taste, and perfectly free from noxious germs. In this brief formula all the essential points are comprised, but unfortunately it cannot be said to be universally applicable throughout the French navy. Notwithstanding all the attention that has been devoted to the subject and in spite of the numerous remedial measures proposed by naval medical officers, many of which have been adopted, the appliances for the storage and distribution of potable water still leave something to be desired in some French war vessels. Dr. Le Méhauté proposes to substitute water that has been sterilised by heat for the distilled water at present used, the latter, in his opinion, being open to many grave objections, including excessive costliness. To install the system which he proposes would cost very little, as the existing pipes and reservoirs could be utilised. The only innovation would be the steriliser which should be placed between the storage tanks and the distributing fountains. Towards the end of his article (first part) Dr. Le Méhauté describes and illustrates a fountain which he has invented in order to enable each individual to have a separate drinking utensil. This fountain consists of a semi-cylindrical receptacle of copper fixed at a convenient height and fitted with five tubes which close by means of taps. When a sailor wants to drink all he has to do is to affix a sterilised mouthpiece, which he finds in a suitable dish, to the end of one of the tubes and to apply his lips to it precisely like a baby with a bottle. He then turns the tap and sucks until his thirst is assuaged. As soon as this object is achieved he has to close the tap and throw his mouthpiece into another dish to await sterilisation. It is part of the chief sick-bay attendant's duty to look after the fountains and to see that the mouthpieces are duly disinfected, and also to make sure that a supply of these is forthcoming when required.

THE ARMY MEDICAL RESERVE.

Mr. George Stoker, C.M.G., in a letter to the *Times* of Dec. 8th pleads for "an efficient and adequate reserve for the Army Medical Service. The Army Medical Service has been greatly improved in many ways and no doubt much that still remains to be done in this direction will eventually be accomplished, but, be it ever so perfect, an Army Medical Service sufficient for peace requirements can never meet the exigencies of a great war." The scheme for an Army Medical Reserve of which he gives an outline "consists in the organisation of a system which shall embrace a number of units called civilian auxiliary hospitals, to be set on foot in times of peace and called out for service in times of war and stress. These hospitals would be organised in connexion with, and affiliated to, the general hospitals throughout the empire. Such institutions would afford an ample and continuous supply of efficient physicians, surgeons, and nurses."

THE AMIR OF AFGHANISTAN AND HIS ARMY.

Our readers may be glad to have their attention directed to an article in the *Fortnightly Review* for this month on "The Awakening of Afghanistan," in which there is an interesting reference to the beneficial medico-political influence of such services as that rendered by Major Bird, I.M.S., by his journey to Cabul and his successful treatment of the Amir. The paper is well worth reading as a whole, for it gives a good picture of the relations existing between the Amir and the Indian Government and how these may be best strengthened and developed for the mutual benefit of both.

THE WAR IN THE FAR EAST.

The only important war news to be recorded concerns Port Arthur and what practically amounts to the total destruction of the Russian fleet there. The capture of 203 Metre Hill by the Japanese, which gave rise to heavy losses on both sides, has been followed by the evacuation of several adjoining positions on the part of the Russians and it is to be hoped that there will soon be an end to further futile fighting and carnage in this direction. When the Baltic Fleet arrives at Port Arthur, if it ever does, it seems certain that it will get no aid from the once splendid fleet in the Pacific and cannot count upon the harbour and fortress as a shelter and naval base of operations. From Manchuria there is no news of importance. The temperature on the Shaho is 20° below zero but according to official accounts from Tokio the Japanese forces being amply supplied with warm clothing are standing the cold very well and are in a satisfactory state of health. With regard to the Russians, the reports about their health and hospital and medical arrangements generally are conflicting. According to the description given by Major Seaman, medical officer of the United States army, he found a striking difference between the health conditions and medical arrangements of the two armies, those on the Russian side contrasting very unfavourably in those respects with those obtaining in the Japanese armies. Nor does Major Seaman stand alone in this view, for Dr. Dvoretzky of Moscow has recently described the shortcomings and limited authority of the Russian army medical service. There is evidently a strong feeling in Moscow that the very favourable health reports which have been published by the Russian Government do not represent the real state of affairs at the seat of war.

The Russian hospital ship *Orel*, the equipment of which has been conjointly carried out by the Russian and French Red Cross Societies, has arrived at the Cape. The hospital staff includes 80 nurses and the vessel is provided with a number of boats and launches intended for the removal and succour of the wounded in case of a naval action.

The advices of the Russian Red Cross Society mention a large number of cases of mental trouble in the army, says the *Novoe Vremya*. These cases are sent to Moscow or to St. Petersburg where they might be properly attended to if these towns would not delay in the construction of suitable infirmaries. For this purpose there have been 2,500,000 roubles available for several years, but although this sum has been gathering interest no hospitals have been built for the insane.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 7718 births and 5426 deaths were registered during the week ending Dec. 10th. The annual rate of mortality in these towns, which had been 16·6, 17·3, and 21·6 per 1000 in the three preceding weeks, declined again last week to 18·5 per 1000. In London the death-rate was 18·1 per 1000, while it averaged 18·7 in the 75 other large towns. The lowest death-rates in these towns were 8·9 in Bournemouth, 9·5 in Smethwick, 10·4 in Aston Manor, 10·9 in Hornsey, 11·7 in King's Norton and in Newport (Mon.), 11·8 in Devonport, and 12·0 in Northampton and in West

Hartlepool; the highest rates were 23·2 in Manchester and in Wigan, 23·3 in Plymouth, 23·6 in Tynemouth, 23·9 in Reading, 24·5 in Hanley and in Newcastle-upon-Tyne, 25·0 in Salford, and 26·2 in Walsall. The 5426 deaths in these towns last week included 438 which were referred to the principal infectious diseases, against 444, 400, and 482 in the three preceding weeks; of these 438 deaths, 136 resulted from measles, 80 from diphtheria, 71 from whooping-cough, 53 from diarrhœa, 50 from scarlet fever, 47 from "fever" (principally enteric), and one from small-pox. No death from any of these diseases was registered last week in Hastings, Southampton, Reading, King's Norton, Smethwick, or Rotherham; while they caused the highest death-rates in Plymouth, Hanley, Wallasey, Wigan, Salford, Burnley, York, Stockton-on-Tees, South Shields, and Gateshead. The greatest proportional mortality from measles occurred in Liverpool, Wigan, Salford, Burnley, Middlesbrough, South Shields, Gateshead, and Tynemouth; from scarlet fever in Devonport, Warrington, and York; from diphtheria in Brighton and Wallasey; from whooping-cough in Wigan, Preston, and Barrow-in-Furness; from "fever" in Rhondda; and from diarrhœa in Plymouth, Oldham, and West Hartlepool. One fatal case of small-pox was registered in Hanley but none in any other of the 76 large towns. The number of small-pox patients in the Metropolitan Asylums hospitals, which had been one, one, and three at the end of the three preceding weeks, had risen to four at the end of last week; one new case was admitted during the week, against two cases in each of the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, the 10th inst., was 2490, against 2774, 2741, and 2625 on the three preceding Saturdays; 263 new cases were admitted during the week, against 259, 262, and 247 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 361, 385, and 565 in the three preceding weeks, declined again last week to 448 but were 30 in excess of the number in the corresponding period of last year. Influenza was stated to be the primary cause of 30 deaths in London last week, against 18, 30, and 26 in the three preceding weeks. The causes of 66, or 1·2 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Portsmouth, Leicester, Salford, Leeds, Cardiff, and in 40 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Sheffield, Hull, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·3, 18·0, and 21·2 per 1000 in the three preceding weeks, declined again to 19·7 per 1000 during the week ending Dec. 10th, but was 1·2 per 1000 above the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·3 in Perth and 13·0 in Leith to 19·2 in Paisley and 23·1 in Glasgow. The 653 deaths in these towns included 38 which were referred to whooping-cough, 15 to diarrhœa, 10 to measles, three to diphtheria, one to scarlet fever, and one to "fever." In all, 68 deaths resulted from these principal infectious diseases last week, against 47, 60, and 71 in the three preceding weeks. These 68 deaths were equal to an annual rate of 2·1 per 1000, which was 0·6 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 19, 21, and 34 in the three preceding weeks, further rose last week to 38, of which 32 occurred in Glasgow, three in Edinburgh, and two in Dundee. The deaths from diarrhœa, which had been 19, 18, and ten in the three preceding weeks, rose again to 15 last week and included six in Glasgow, three in Edinburgh, three in Dundee, and two in Aberdeen. The fatal cases of measles, which had been five, eight, and 16 in the three preceding weeks, declined again last week to ten, of which seven were registered in Aberdeen and two in Glasgow. The deaths from diphtheria, which had been nine and six in the two preceding weeks, further declined last week to three and included two in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 154, 174, and 190 in the three preceding weeks, further rose last week to 204 and were 12 in excess of the number in the corresponding period of last year. The causes of 16, or more than 2 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·2, 22·6, and 27·0 per 1000 in the three preceding weeks, declined to 25·2 per 1000 during the week ending Dec. 10th. During the past four weeks the death-rate has averaged 24·8 per 1000, the rates during the same period being 18·4 in London and 16·4 in Edinburgh. The 183 deaths of persons belonging to Dublin registered during the week under notice included 14 which were referred to the principal infectious diseases, against 21 and 20 in the two preceding weeks; of these, 10 resulted from measles, two from "fever," one from scarlet fever, and one from diarrhœa, but not any from small-pox, from diphtheria, or from whooping-cough. These 14 deaths were equal to an annual rate of 1·9 per 1000, the death-rates last week from the principal infectious diseases being 1·1 in London and 0·9 in Edinburgh. The fatal cases of measles, which had been eight, 12, and 12 in the three preceding weeks, declined again last week to ten. The 183 deaths in Dublin last week included 35 of children under one year of age and 47 of persons aged 60 years and upwards; the deaths of infants were slightly in excess of the number in the preceding week, while those of elderly persons showed a decline. Four inquest cases and two deaths from violence were registered; and 74, or more than two-fifths, of the deaths occurred in public institutions. The causes of seven, or nearly 4 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1904.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 7·2 per 1000 of the population, estimated at 4,648,950 persons in the middle of the year. In the three preceding months the rates had been 6·0, 8·0, and 9·0 per 1000 respectively. The rates were considerably below the average in Kensington, Chelsea, the City of Westminster, Hampstead, Holborn, and the City of London, while they showed the largest excess in Hackney, Bethnal Green, Stepney, Poplar, Bermondsey, and Woolwich. The notified cases of small-pox, which had numbered four, four, and one in the three preceding months, rose again last month to six, of which three belonged to Deptford, two to St. Pancras, and one to Stepney. The Metropolitan Asylums hospitals contained three small-pox patients at the end of last month, against nine, three, and one at the end of the three preceding months. Scarlet fever was much less prevalent during last month than it had been in the preceding month; among the various metropolitan boroughs this disease showed the greatest proportional prevalence in Stoke Newington, Hackney, Poplar, Wandsworth, Camberwell, Lewisham, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1801, 2127, and 2662 at the end of the three preceding months, had declined again to 2566 at the end of last month; the weekly admissions averaged 254, against 214, 311, and 359 in the three preceding months. The prevalence of diphtheria showed a slight decline last month; this disease was proportionally most prevalent in Fulham, Hackney, Bethnal Green, Stepney, Poplar, and Woolwich. The Metropolitan Asylums hospitals contained 893 diphtheria patients at the end of last month, against 818, 871, and 940 at the end of the three preceding months; the weekly admissions averaged 123, against 119, 131, and 139 in the three preceding months. Enteric fever was rather less prevalent than in the preceding month; among the various metropolitan boroughs this disease showed the greatest proportional prevalence in Hackney, Holborn, Stepney, Poplar, and Bethnal Green. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 135, 237, and 225 in the three preceding months, had further fallen at the end of last month to 178; the weekly admissions averaged 25, against 29, 45, and 25 in the three preceding months.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1904.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1904.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.													
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON	4,648,550	6	1544	782	—	270	5	34	196	—	3197	7·2	—	89	54	79	45	—	37	—	107	411	0·9	7389	16·6	125
West Districts.																										
Paddington	146,975	—	43	17	—	6	—	—	19	—	85	6·0	—	—	1	5	1	—	1	—	9	17	1·2	204	14·5	137
Kensington	179,236	—	16	25	—	3	—	2	17	—	63	3·7	—	—	1	2	1	—	1	—	3	8	0·5	275	16·0	143
Hammersmith	117,412	—	36	22	—	4	—	1	14	—	77	6·8	—	1	3	4	5	—	—	—	4	17	1·5	186	16·5	167
Fulham	152,482	—	34	41	—	2	—	—	18	—	95	6·5	—	1	1	—	6	—	—	—	8	16	1·1	222	15·2	112
Chelsea	74,329	—	21	4	—	1	—	1	4	—	31	4·3	—	—	1	1	—	—	1	—	1	4	0·6	117	16·4	231
City of Westminster	177,321	—	34	13	—	8	1	1	13	—	70	4·1	—	—	—	—	1	—	—	—	4	5	0·3	201	11·8	95
North Districts.																										
St. Marylebone	130,337	—	24	16	—	4	—	—	24	—	68	5·4	—	—	—	1	—	—	—	—	3	4	0·3	207	16·6	108
Hampstead	86,663	—	21	6	—	1	—	1	2	—	31	3·7	—	—	—	—	1	—	—	—	1	2	0·2	80	9·6	126
St. Pancras	235,936	2	47	34	—	13	—	2	27	—	125	5·5	—	5	2	7	4	—	1	—	2	21	0·9	449	19·8	146
Islington	341,044	—	124	51	—	20	—	4	41	—	240	7·3	—	6	1	5	3	—	5	—	6	26	0·8	548	16·8	122
Stoke Newington	52,445	—	23	7	—	1	—	—	7	—	38	7·6	—	2	—	1	—	—	—	—	1	4	0·8	73	14·5	66
Hackney	226,266	—	130	52	—	20	—	3	38	—	243	11·2	—	6	6	5	—	—	2	—	2	21	1·0	339	15·6	122
Central Districts.																										
Holborn	57,161	—	7	2	—	8	—	1	6	—	24	4·4	—	—	—	—	—	—	—	—	5	5	0·9	121	22·1	185
Finsbury	98,958	—	34	16	—	7	—	1	11	—	69	7·3	—	8	3	3	—	—	4	—	1	19	2·0	201	21·2	105
City of London	23,482	—	—	3	—	1	—	—	4	—	8	3·6	—	—	—	—	1	—	—	—	—	1	0·4	27	12·0	79
East Districts.																										
Shoreditch	117,033	—	33	14	—	6	—	—	19	—	72	6·4	—	5	—	—	1	—	1	—	3	10	0·9	252	22·5	198
Bethnal Green	130,207	—	56	43	—	10	2	2	30	—	143	11·5	—	4	4	6	5	—	1	—	2	22	1·8	272	21·8	155
Stepney	303,791	1	128	98	—	35	—	1	54	—	317	10·9	—	9	7	13	1	—	7	—	8	45	1·5	607	20·8	153
Poplar	169,905	—	69	81	—	15	—	2	29	—	196	12·0	—	2	4	10	2	—	3	—	10	31	1·9	201	18·5	120
South Districts.																										
Southwark	207,937	—	43	23	—	12	—	1	41	—	120	6·0	—	1	4	1	1	—	4	—	4	15	0·8	291	19·6	150
Bermondsey	129,397	—	61	15	—	7	—	—	21	—	104	8·4	—	12	2	—	3	—	1	—	2	20	1·6	255	20·6	185
Lambeth	310,359	—	90	38	—	12	2	4	23	—	169	5·7	—	3	2	2	2	—	2	—	7	18	0·6	460	15·5	128
Battersea	175,465	—	45	24	—	10	—	—	18	—	97	5·8	—	—	1	3	—	—	—	—	3	7	0·4	222	13·2	104
Wandsworth	257,448	—	109	43	—	5	—	3	35	—	195	7·9	—	12	1	4	1	—	—	—	3	21	0·9	314	12·7	106
Camberwell	268,384	—	130	27	—	11	—	2	27	—	197	7·7	—	—	5	1	2	—	—	—	5	13	0·5	295	15·3	123
Deptford	113,509	3	32	16	—	4	—	1	22	—	78	7·2	—	1	1	—	1	—	1	—	3	7	0·6	177	16·3	135
Greenwich	101,651	—	37	3	—	—	—	—	14	—	54	5·5	—	—	—	1	1	—	1	—	2	5	0·5	158	16·2	125
Lewisham	140,401	—	56	19	—	2	—	1	10	—	88	6·5	—	7	1	2	1	—	—	—	3	14	1·0	167	12·4	115
Woolwich	123,416	—	61	29	—	1	—	—	8	—	99	8·4	—	4	3	2	1	—	1	—	2	13	1·1	168	14·2	147
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

Erysipelas was proportionally most prevalent in St. Marylebone, Hackney, Bethnal Green, Stepney, Poplar, Southwark, and Deptford. The 34 cases of puerperal fever notified during the month included four in Islington, four in Lambeth, three in Hackney, and three in Wandsworth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the five weeks ending Dec. 3rd the deaths of 7389 persons belonging to London were registered, equal to an annual rate of 16·6 per 1000; in the three preceding months the rates had been 19·1, 14·0, and 14·3 per 1000. The lowest death-rates in London last month were 9·6 in Hampstead, 11·8 in the City of Westminster, 12·0 in the City of London, 12·4 in Lewisham, and 12·7 in Wandsworth; the highest rates were 20·6 in Bermondsey, 20·8 in Stepney, 21·2 in Finsbury, 21·8 in Bethnal Green, 22·1 in Holborn, and 22·5 in Shoredith. The 7389 deaths from all causes included 411 which were referred to the principal infectious diseases; of these, 89 resulted from measles, 54 from scarlet fever, 79 from diphtheria, 45 from whooping-cough, 37 from enteric fever, and 107 from diarrhœa. The lowest death-rates from these diseases last month were recorded in the City of Westminster, St. Marylebone, Hampstead, the City of London, and Battersea; and the highest rates in Hammersmith, Finsbury, Bethnal Green, Stepney, Poplar, and Bermondsey. The 89 fatal cases of measles showed a decline of 127 from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Stoke Newington, Finsbury, Shoreditch, Bermondsey, Wandsworth, and Lewisham. The 54 deaths from scarlet fever were 13 below the average number in the corresponding periods of the ten preceding years; this disease showed the greatest proportional mortality in Hammersmith, Hackney, Finsbury, Bethnal Green, and Woolwich. The 79 fatal cases of diphtheria showed a decline of 135 from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Hammersmith, St. Pancras, Finsbury, Bethnal Green, Stepney, and Poplar. The 45 deaths from whooping-cough were equal to only one-half of the average number in the corresponding periods of the ten preceding years; the greatest proportional mortality from this disease occurred in Hammersmith, Fulham, St. Pancras, the City of London, Bethnal Green, and Bermondsey. The fatal cases of enteric fever numbered 37 last month, against a corrected average of 110; among the various metropolitan boroughs the highest death-rates from this disease were recorded in Islington, Finsbury, Stepney, Poplar, and Southwark. The 107 deaths from diarrhœa were slightly in excess of the corrected average number; this disease was proportionally most fatal in Paddington, Fulham, Holborn, Poplar, and Deptford. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases was nearly 49 per cent. below the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 135 per 1000. The lowest rates of infant mortality were recorded in the City of Westminster, Stoke Newington, Finsbury, the City of London, Battersea, and Wandsworth; and the highest rates in Hammersmith, Chelsea, Holborn, Shoreditch, and Bermondsey.

Correspondence.

"Audi alteram partem."

THE PROPOSED GENERAL REGISTRATION OF MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—Although I have ceased to be a member of the General Medical Council I continue to be much interested in its proceedings and observe with regret the abortive issue of the recent discussion on the above subject, and I think few of your readers but will agree with Sir Victor Horsley who said that the "Council was stultifying itself," and I cannot imagine any vote more likely to lower the Council in the estimation of the public than the one he refers to. The Council accepted a meaningless resolution as a means of escaping the expressing any opinion on a question of vital interest to the profession and to the public. I venture to think it worth while trying to elucidate the reasons why this resolution was adopted by so large a majority.

The question before the Council involved two distinct questions. First, the advisability of increasing the income of the Council by imposing a fee on the registration of medical students; and secondly, that of the compulsory registration of medical students. It is admitted that the income of the Council is insufficient for the due performance of its duties, and three methods have been suggested for augmenting it—viz., first, a tax of say £1 imposed on all registered practitioners. This would bring in a large revenue but it would be very difficult to collect, would be resisted by many members of the profession, and as it would necessarily involve the erasure of the name of all defaulters from the Register this would react very harshly and unfairly on not a few practitioners who certainly from various causes would fail to pay the tax punctually. It is supported, however, by some members of the Council, obviously because it would be a step towards having the Council largely composed of "Direct Representatives."

The second method proposed is by the raising the present registration fee of £5 to £10, resisted, I think, on the ground of its being a tax on the profession, which it certainly is not, for the fee is paid by the parent or guardian of the medical student on his admission to the Register of medical practitioners; the Stamp Duty and other fees paid by certain classes of law students might equally well be called a tax on their profession, but the curious feature is that many who approve of a real tax of, say, £1 per annum to be paid by all practitioners object to this increased registration fee, which is not such. Lastly, we have the proposal that a small fee be paid on the registration of students; £1 was the sum named; against this a great outcry is raised. Why is this so? Is it possible that anyone thinks in all sincerity that the registration of medical students is not desirable, and if desirable should it not be compulsory, and is it not fair that a fee should be paid to cover office and other expenses? Clearly it is not the small fee which has raised this outcry.

The opposition to the proposal is without doubt due to the dread of the registration of students being made "compulsatory" and the fear that then the General Medical Council may obtain powers to enforce a higher standard of preliminary education than is at present accepted by at least some of the universities and licensing bodies; in fact, the real question at issue during the recent debate was not how an additional income could best be raised but whether the Council should be intrusted with power to inspect the examination of intending medical students in the subjects of preliminary education so as to exclude from entrance into the profession those whose education is so defective as to render them unfit ever to become efficient medical practitioners. For myself, I have ever held that to raise the standard of professional education it is absolutely necessary first to raise the standard of preliminary education, but at present the Medical Council has not the power to do so efficiently. I cannot think that the University of Oxford would have any objection to the Medical Council inspecting the examinations held by it in the case of candidates for its medical degrees, but I do not think that such inspection should be required from students who take out the full course of studies and pass the examination required for the B.A. degree of that or any other university, but certainly those universities which grant the M.B. or M.D. degrees without requiring this should be inspected, and the fear of this accounts for the opposition of the representative of the Royal University of Ireland and very likely of other universities also.

But the most determined opposition to the compulsory registration of students comes from the Conjoint English Colleges, and as I am satisfied that they are far from opposing the raising the standard of preliminary education it is not difficult to see that the real grounds of their opposition to compulsory registration of students rests mainly, if not entirely, on the opposition of the Council to the study of chemistry and physics at other than medical schools or a few scientific institutions, an opposition which, in my opinion, is very unwise, and to this opposition I fear the failure to improve the standard of the preliminary education of

students will be mainly due. I have even held that the study of these subjects should be encouraged during the last year of school life and I approve of the action of the English Colleges in recognising the teaching of these subjects in all such schools as have proper means of so doing, and I think the discussion on Dr. Lindsay Steven's resolution supports this view, for if intending medical students studied the subjects to be passed in what in that resolution is termed "the preliminary scientific examination" before becoming medical students much, if not all, of the evils on which he and his seconder enlarged would be removed. There is no doubt but that the raising of the standard of preliminary education would for a time injuriously affect Ireland where the standard of such education is lower than in the sister islands. Much as I regret that this should be the result, specially as regards the Irish Conjoint Colleges, it would ultimately be for their advantage. There is much comment here relative to the low standard of success attained by candidates from these bodies in the examinations for commissions in the army and navy medical services and the question is being discussed, How is the failure to be accounted for? To me it seems that the fault lies in the lower standard of preliminary education which exists in Ireland, for the purely professional education is good, and this opinion is strengthened by the fact that the success attained by candidates from the University of Dublin, all of whom are required to take out the B.A. degree, stands very high.

I cannot but believe that the time will ere very long arrive when chemistry, physics, and also indeed biology will form part of the subjects to be passed in the examinations to be held previous to the registration of medical students, and I feel equally confident that the compulsatory registration of medical students will also be adopted, for it is impossible that the public good which demands the services of highly-educated medical men alike for the poor and the rich will be sacrificed to the interest of a few universities or licensing bodies.

I am, Sirs, yours faithfully,

Dec. 9th, 1904. LOMBE ATTHILL, M.D. Dub.

METROPOLITAN HOSPITAL SUNDAY FUND.

To the Editors of THE LANCET.

SIRS,—An effort is about to be made to increase the collections on behalf of the metropolitan hospitals and dispensaries on Hospital Sunday, June 25th, 1905, and it would be a great stimulus to the various congregations in the metropolitan area if the collections at St. Paul's Cathedral on Hospital Sunday could be increased from their present total of £5490 to £10,000. It is believed that the coöperation of the town travellers of the large City houses will be a very powerful factor in carrying this, or any other plan suggested by themselves, into effect for increasing the Fund to £100,000 on next Hospital Sunday.

The Lord Mayor, with this object in view, has convened a meeting at the Mansion House on Saturday, Dec. 17th, 1904, at 4 o'clock.

I am, Sirs, yours faithfully,

EDMUND HAY CURRIE, Secretary.

Mansion House, E.C., Dec. 7th, 1904.

INSTRUCTION OF THE LAITY IN THE EARLY SIGNS OF CANCER.

To the Editors of THE LANCET.

SIRS,—Mr. A. W. Mayo Robson, in concluding his Bradshaw Lecture on the Treatment of Cancer, says: "Is it too much to hope that some of the views I have enunciated may filter through the profession to the public and serve to convince them that until a true prophylactic for cancer is discovered they will be consulting their own interests best by seeking medical advice earlier, since to trifle with their ailments in the early stages is to lose the favourable moment and ultimately to hear the verdict, alas, too often pronounced, Too late."

The chances of the above filtering process taking place, either through the profession or the lay press, are, under present conditions, *nil*. In 12 months' time the public will know as little of the elementary facts concerning cancer as it does to-day. Every recent work on cancer includes an appeal so frequently repeated as to be almost monotonous for earlier treatment by operation based on earlier diagnosis. Earlier diagnosis can only follow earlier appeal by the patient to the medical man. Earlier application to the medical man can only result from familiarity with the earliest signs of cancer, a knowledge in which the laity is at the present time sadly deficient. The layman who sees cancer cases chiefly in their later and painful stages concludes, not unnaturally, that cancer is in all its stages a painful disease, and that any disease or tumour which is not painful cannot be cancer. So long as the public mind is possessed by this idea it is useless for the surgeon to hope to see the majority of cancer patients in a stage of the disease sufficiently early to be curable by a radical operation.

The remedy is the direct education of the public by the profession, but this is far easier said than done. One method is to induce medical men, employed as lecturers by educational authorities, ambulance, first-aid, and similar societies, to include in their lectures a statement and explanation of the signs of cancer in its earliest stages, and to emphasise the fact that of cancer cases in which a radical operation is performed in the early stages at least 50 per cent. are permanently cured. Such teaching is really a form of "first-aid" and would save more lives in a year than instruction in the differential diagnosis of fractures and dislocations or the various forms of unconsciousness would save in a century. Another means of instructing the public is to teach the nurses connected with hospitals and nursing institutions the elementary facts concerning the early stages of cancer. Nurses, while attending patients in private houses, are frequently appealed to by relatives and friends of the patients to say whether a "lump" or "swelling" is of any importance, the possessor of the tumour frequently stating that the "swelling" cannot be a cancer because it gives no pain.

The laity, which is being instructed in the prevention and cure of consumption, must be educated in the equally important subject, the prevention and cure of cancer. Such teaching must point out that (1) cure of cancer is only possible by an operation performed while the growth is in an early stage; (2) the early stages of cancer are free from pain; and (3) among the first signs of cancer are (*a*) the appearance of a small, painless swelling or (*b*) the occurrence of discharges, not of necessity blood-stained, from the genito-urinary or rectal orifices unaccompanied by pain.

Publication in the lay press of extracts from lectures delivered at medical meetings will never educate the laity. It is futile for surgeons to go on hoping that the public will teach itself the above facts. The public must be taught and it is the duty of medical men to act as teachers. The above suggestions cover but a few of the methods by which this teaching may be carried out and it is only by employing every available means of instruction that the surgeon can hope to reduce the number of occasions on which he is compelled to pronounce the verdict "Too late."

I am, Sirs, yours faithfully,

Plymouth, Dec. 4th, 1904. C. HAMILTON WHITEFORD.

THE PAINS OF INFLUENZA.

To the Editors of THE LANCET

SIRS,—It is probable that pain results from the partial disintegration of structure occasioned by the accumulation of waste products. In other words, it is the subjective expression of defective or perverted metabolism, and this, in its turn, may be set about by almost any disease. A human being suffers from vague pains, which gradually become worse, and then perhaps quite suddenly rise to an overwhelming intensity in one part—probably the structures in and around some joint. There may be epigastric or umbilical pain and intense headache, but the chief stress probably falls upon some articulation, that of the left shoulder, for example, a knee, finger, or toe, the disturbance extending often to adjacent muscles and bones. In the patient now taken for illustration there was no swelling in or near the joint, but later there was some slight swelling of the hands, between the phalangeal joints, and also a little of the arm. The muscles of this left arm were tender and painful and incapable of voluntary use, but they contracted involuntarily. The same side of the trunk and, to a less extent, the whole of the body were affected in a similar manner. The muscles, the bones, the tendinous sheaths, and especially the joint structures were very painful. The urine was loaded with urates, and other acute febrile symptoms

were shown. Luckily the disturbance was confined to one part mainly, and the heart, being strong, was able to bear the strain put upon it. The case appeared to be one of influenza and yet was one not unlikely to be designated acute rheumatism.

Pains, like those of rheumatism, occurring in patients suffering from influenza, might possibly be supposed to be due to the sufferers having been previously afflicted with the former malady. In certain cases this may be true; but, on the other hand, it is perhaps equally probable that some so-called rheumatic pains may really be caused by the virus of influenza. This latter disease in its rheumatic form may be unaccompanied by sore-throat or tonsillitis, but the tongue has a thick white or brownish fur. There may be no definite affection of either the digestive or the respiratory systems, though either or both may be also attacked. This kind of influenza, in which the chief symptoms are muscular and articular pains, may occur in persons who are almost invulnerable to ordinary colds or chills. The pains may render the sufferers completely prostrate. In typical rheumatic fever there is frequently much swelling of the tissues around the several joints affected. Many joints may be implicated both concurrently and consecutively, and the mischief is often transferred from some to other joints. In cases of influenza there is a more frequent and severe affection of muscles, and generally one group of articulations in contiguity or propinquity bears the brunt of the storm, the affection extending directly therefrom so as to involve by degrees, e.g., all or most of the joints of the shoulder, arm, and hand, even the phalangeal joints not escaping. Perhaps, however, the progress of the disease may be arrested at the original site or at any point.

Some influenza patients are affected with ulcerative tonsillitis (simulating diphtheria) or of tonsillitis without ulceration, quickly followed or not, as the case may proceed, by lung troubles perhaps; some with gastro-intestinal disturbance mainly (often closely resembling typhoid fever); and, finally, a few, apparently well-nigh invulnerable in the ordinary manner, or at any rate strong in both respiratory and alimentary systems; are, after perhaps resisting the disease for weeks or even months, the body fighting against the poison all the time but succumbing to its insidious onslaughts at last, attacked with the rheumatic form of the malady. It seems as if the poisonous products of tissue-changes in cases of perverted metabolism, being carried all over the system by the blood and lymph channels, succeed in damaging and partially destroying such parts as are most vulnerable, howsoever that liability to be damaged may have been brought about. Indeed, this general statement is perhaps applicable to all the phenomena of disease, even such special symptoms as rashes, &c., being also similarly determined. One may even suspect that the non-appearance of rashes may at times mask, e.g., such diseases as variola, and it is not impossible that such a case might even be mistaken and called acute rheumatism. Unfortunately, we are apt to be misled by our love of definite demarcations, and we may easily lay too much stress on subsidiary symptoms which may or may not be present.

When influenza is rife the subjects of it carry the virus wherever they go, and there is no possibility of entire escape from being in proximity with it now and again, and that is why it was said above that one may succumb at last after resisting the malady for weeks or months.

By this kind of influenza the patient may be rendered helpless, unable perhaps even to turn round in bed. The muscles of the affected part contract involuntarily and the fibrillar movements can be occasionally felt by the patient. The contractions are probably stimulated by some impurity in the blood supplied and in turn they augment that impurity by the making of waste products. They are beneficial, however, in so far as they tend to keep bones, joints, and organs at rest, though otherwise mischievous. The perspiration is profuse and though it gives off a vinegar-like smell, has also a sickly, pungent, unpleasant odour, reminding one of the smell of mice, or valerian, or variola, which is far more powerful than the acid smell. As to treatment, in my opinion morphine, colchicum, most salicylates, bromides, and iodides should be avoided as doing just as much harm as good. Aspirin, indeed, is the only salicylate preparation which can be tolerated by many, and it is beneficial in allaying pain and inducing sleep. The alkaline treatment—e.g., with bicarbonate of potassium—may safely be pushed until the urine is neutral, and should then be temporarily stopped until that fluid regains normal acidity. Guaiacum is useful in some cases and so are gelsemium and the ordinary anti-febrile agents which must not be forgotten. The best local remedial agent is heat, applied either in the form of hot water bottles wrapped in flannel or by hot bricks or other solid substances similarly covered. If a limb is placed in a warm limb-bath containing warm water or a weak solution of permanganate and bicarbonate of potassium great relief is experienced by the sufferer. It is sometimes useful to alternate the aspirin and the alkaline treatment. Each case must be studied separately, and by skilful and patient treatment, coupled with zealous nursing, a cure can generally be obtained, even though it be tardy. A point of importance is that I believe there are three classes of cases presenting allied symptoms—viz., (1) those one may call rheumatic, (2) those we refer to as gout, and (3) those we may designate as infectious, produced by germs, sometimes by those of influenza, sometimes of other maladies. I fear my wish to occupy your space with dilating further on this important topic must now be restrained, and thanking you in anticipation.

I am, Sirs, yours faithfully,

GEORGE GRESSWELL, M.A., L.R.C.P. Edin.

Great Grimsby, Dec. 10th, 1904.

MILK AND ITS DERIVATIVES AS FOOD.

To the Editors of THE LANCET.

SIRS,—Dr. Harry Campbell has recently published an exhaustive review of the Evolution of Man's Diet.[1] Were he to perform a like task 200,000 years hence he would possibly describe the diet-epoch of to-day by a neat equivalent of "early chemico-physiological." The epoch would be characterised by primitive methods of supplying the individual elements of food to the organism in a concentrated and diffusible form and by a corresponding involution of the digestive organs. No serious attempt would have yet been made to elaborate food direct from inorganic sources, that process remaining for some 50,000 years longer the exclusive province of the vegetable kingdom. The question which presents itself to the mind thus peering into future eons is whether it is better to aim at perfecting the human organism at its present stage of development, while ignoring the inevitable march of evolution, or whether to anticipate the latter and deliberately encourage the involution of those organs the essential utility of which is threatened by the onward march of the arts and sciences under the ægis of accumulating knowledge. The answer is that man neither heeds his origin nor his bourne: they are too remote; he neither regrets the massive inferior maxilla of simian ancestors nor does he betray impatience to acquire the edentulous oral cavity of remote descendants. He is content to assume that his present type is permanent and consequently need concern himself alone with the task of perfecting that type. It is ignorance, not design, that leads him to infringe the laws which govern the wellbeing of his actual state. He passes his life in an atmosphere of foul air because he ignores its harmfulness, not because he wishes gradually to acclimatise his race to such a medium; he feeds on concentrated food because he thinks it is good for his digestion, not because he designedly wishes to hasten the march of evolution.

Assuming, then, that the tacit aim of mankind is to maintain his present type, it behoves the physician not only to promote the development of the organic potentialities as a whole but to watch for indications of premature decay involving individual organs, to inquire into the causes, often insidious in their line of approach and paradoxical in their workings, which coöperate to initiate and perpetuate retrogressive processes and to point out the rational means of defence against the operation of such causes. This conception of the physician's province induces me to review the position of milk and its derivatives as human food considered in its bearing on the widespread prevalence of functional weakness and structural degeneration of the digestive organs.

In a large proportion of the community the modern, civilised digestive tract is a pathological specimen from end to end. The buccal cavity exhibits a picture of ruin and decay in its dental armoury and glandular apparatus, the anal orifice is girt about with a ring of

[1] THE LANCET, Sept. 10th, 17th, and 24th, 1904, &c.

piles, while the intervening portion with its accessory organs affords a kaleidoscopic picture of pathological changes exhibiting a selective preference for certain localities. Whence this morbid tendency to dry rot and premature decay? Among the many causes which may contribute towards the premature degeneration of the digestive organs, one is prompted to seek first in the direction of their special function to ascertain if the food habitually taken is calculated to call into play the functional activity of the digestive organs. On the threshold of this inquiry one is met with a negative answer—a great proportion of our food is taken in a liquid, pulpy or soft form; consequently it fails to afford the stimulus necessary to maintain the teeth and buccal glands in a state of functional efficiency. The false start anticipates a lame race and a poor finish to the digestive processes.

Milk is the most widely distributed form of liquid food and affords a convenient example of the scope and limitations of liquid foods in general. As a food it has the following advantages: it is a complete and highly nitrogenous food; it can be taken easily and rapidly; moreover, being a natural food, it is not as a rule distasteful to the individual. But with each of these advantages are associated certain drawbacks, if we put aside milk drawn at the fountain head in the normal way. Being a complete food milk may form an exclusive diet, a purpose for which it is frequently employed, as in the systematic treatment of renal affections. In a person thus nourished one frequently finds the tongue coated, the breath foul, and a condition of habitual constipation. The diet makes no demand on the functional activity of the muscles of mastication nor on the salivary, lingual, and mucous glands; moreover, apart from the absence of stimulus to secretion, the mucous surfaces become lined with a thin film of milk which blocks their orifices and forms a nidus for the growth of saprophytes. Hence a foul mouth, coated tongue, and acidity, betraying functional inactivity and initiating structural decay. The liquid meal pours into the stomach unheralded by nervous reflex and unmingled with stimulating salivary secretion. Consequently no preparation has been made for its reception, its visit is unexpected, and its behaviour renders its presence unwelcome. The liquid garb of innocence is discarded and discloses masses of solid curd, difficult of access to the gastric juices, causing an irritative flow of mucus and affording a soil favourable to the growth of a varied pathogenic flora. The fermenting mass of curd struggles through the pyloric orifice, disturbs the hepatic function, irritates the bowel, evolves gases and refuses to move on without the aid of mercurial or saline purgation; in a word, it acts the part of the rabid and iconoclastic social reformer.

Such is often the effect of whole liquid milk taken as an exclusive food. Now, however, it is rarely given without dilution or admixture with other ingredients which serve to break up the curd or otherwise prepare it for absorption. But in whatever form taken liquid milk retains the essential disadvantages of liquid foods in general—viz., that it passes direct to the stomach without making any demand on the complex mechanico-physiological processes of mastication. In contrast with milk in the liquid form its solid derivatives are eminently suitable for human food. Cheese is highly nutritious and in conjunction with butter and wholesome bread it affords a complete and nourishing meal. Its reputation for indigestibility is due to the fact that instead of being recognised as affording the nitrogenous element of a meal in itself it is frequently introduced to the stomach at the end of an already complete meal, with the consequence of an explosive gastric disturbance. Butter is a most useful element of the dietary, it replaces the oil of southern nations and the blubber of the Esquimaux. Essentially a heat producer, it should be taken in larger quantity in cold weather than in hot; its combination with farinaceous food serves to subdivide and render it more accessible to the biliary and pancreatic secretions.

The following summary is based on the argument roughly traced in the above sketch and conveys my conception of the place cow's milk should occupy as human food. 1. In infancy: properly prepared and administered it is the best substitute for mother's milk. 2. In health: when recognised and used as a food and not as a drink it finds a useful place in the dietary both of children and of adults on the following conditions: (*a*) that it be excluded from all meat meals; and (*b*) that it be either diluted or taken with some form of amylaceous food. 3. In disease: it is a readily administered complete food and may be used as such when well diluted or predigested. Its disadvantages are that it fails to excite buccal secretion, readily undergoes fermentative changes, and tends to produce constipation. It should therefore be given for short periods only and be replaced by solid food as soon as possible. It will probably find a progressively lower place in the dietaries of disease as the knowledge of dietetics increases. 4. The solid derivatives of milk—viz., cheese, butter, and cream—are essentially useful constituents of the dietary and afford, with bread, potatoes, and other amylaceous products, a complete food which might well take a more important place in the nutrition of the Anglo-Saxon race than it occupies at the present moment.—I am, Sirs, yours faithfully,

Montreux. STUART TIDEY, M.D. Lond.

THE RESULTS OF COLECTOMY IN CARCINOMA OF THE COLON.

To the Editors of THE LANCET.

SIRS,—In answer to Mr. Bilton Pollard's letter I am very sorry that during the transcription of my notes into type an error has crept into my published lecture, which, however, did not occur during its delivery, when I remarked that Mr. Bilton Pollard and Mr. Charles A. Morton had each performed seven colectomies for cancer without a death.

In the typewritten copy sent to your journal the subsequent histories of Mr. Morton's cases have been placed immediately after Mr. Pollard's name instead of in their proper place a few lines below after Mr. Morton's name. It should read: Mr. Bilton Pollard published in the *British Medical Journal* of Jan. 23rd, 1904, reports of seven colectomies without a death and in none of the cases had there been recurrence of the disease. One patient lived for four years and died from heart disease and the others were living at periods of four years, two and a half years, two years and two months, nine months, six months, and two months respectively after operation.

It adds additional interest to this important series of cases to know that these patients are still free from recurrence and it fully bears out my statement that cases in which the disease is limited ought to be capable of cure by enterectomy if operated on early.—I am, Sirs, yours faithfully,

Park-crescent, W., Dec. 12th, 1904. A. W. MAYO ROBSON.

THE DECLINE IN THE CONSUMPTION OF LIGHT WINES.

To the Editors of THE LANCET.

SIRS,—Having read the article in THE LANCET of Oct. 8th under the heading "The Decline in the Consumption of Light Wines," we, the undersigned members of the Union Syndicale,[1] desire to express our appreciation of the interest you have been good enough to show in the subject of claret drinking. We have long felt that the disfavour into which our wines have fallen has been largely owing to a misapprehension as to their effects on the system from a hygienic point of view—a misapprehension which we cannot help feeling has been increased rather than allayed by a certain number of the medical profession. It is therefore a cause of general satisfaction among shippers here that a journal of your reputation and authority has lent the weight of its influence to restore claret to its former position, to refute the opinion that it is not a wholesome or desirable beverage for daily use, and to impress on the general consumer the fact which is absolutely correct that there never was a time when better value could be obtained in claret than now.

You have touched the right note, too, in bringing out the fact that claret is not properly understood by the majority of people in England. There is no doubt an art in wine-drinking and, unfortunately, it is an art which has of late years disappeared to a great extent. Claret, even in the cheaper grades, requires a certain amount of trouble and care if it is to be properly appreciated and it is just this ignorance in handling it which is so much to be deplored and which results in so many persons banishing it from their table, declaring that the wine does not suit them, &c.

In conclusion, and while tendering you our sincere thanks

[1] Union Syndicale des Négociants en Vins de Bordeaux.

for the intelligent way (if we may use the expression) in which you have brought this matter forward, we should like to record our opinion that, quite apart from trade prejudice, you have rendered an important service to the public by your article. At the same time, the respectable members of the English wine trade owe you a debt of gratitude, for it is an undoubted fact that their interests lie wholly on the side of an increased consumption of light wines as against the prevailing fashionable beverage of "whisky-and-soda."

With apologies for troubling you and with renewed thanks for having lent some of your valuable space to this subject,

We have the honour to remain, Sirs, yours faithfully,

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Bordeaux, Nov. 23rd, 1904.

HORSED AMBULANCES.

To the Editors of THE LANCET.

SIRS,—On behalf of the Metropolitan Street Ambulance Association may I be permitted to endorse the remarks made by Mr. John Troutbeck, the coroner for the south-western district of the county of London, on the urgent need of an efficient ambulance service for street casualties in London? Deaths such as Mr. Troutbeck alluded to are of far too frequent occurrence in the metropolis. Every year not only do people die who might be saved by the prompt arrival of a well-equipped ambulance with its skilled attendant, but some who would not otherwise die lose their lives entirely through the faulty method of their removal in unsuitable conveyances. During the last 25 years great efforts have been made to call attention to this deplorable state of things. His Majesty King Edward VII. when Prince of Wales did a great deal to forward the movement. The president of this association, Mr. Reginald Harrison, who was the initiator of the excellent Liverpool service, has repeatedly since 1881 pointed out what is necessary for London.

In the October, 1896, number of the *Nineteenth Century* appeared a very able article on horse ambulances by the Hon. F. Dudley Leigh who afterwards offered to present a perfectly equipped horse or motor ambulance to any suitable London public body that would accept it as an object lesson of what was done elsewhere. Although met with indifference in regard to his offer he succeeded in interesting some of the members of the London County Council in the subject, foremost of whom was Sir William Collins, who became chairman of the ambulance subcommittee soon afterwards appointed. Unfortunately the report issued by this body in 1902 obtained only half-hearted support from the other members of the late London County Council, so that no practical result followed.

In January of this year the medical profession took the matter in hand and formed themselves into the Metropolitan Street Ambulance Association with a membership which now numbers nearly 1100 of the most eminent medical men in London. This association endeavours to interest the public generally in this subject which so closely concerns every individual in the community. It wishes to see established in London with as little delay as possible an up-to-date ambulance service summonable by telephone and provided with rapid transport, so that skilled aid can be quickly brought to any case of accident or sudden illness occurring in the streets or public places and the patient removed to home or hospital in a comfortable ambulance with a watchful attendant at his side. In this the association has the support of the St. John Ambulance Association, of Mr. H. L. Bischoffsheim, and of practically everyone interested in the welfare of the 15,000 severe casualties occurring in London each year. The vastness of London and the fact that accidents do not recognise municipal boundaries, necessitate the provision of such a service by a public body with the scope of the London County Council which fortunately has ready at hand most of the machinery required in its fire brigade organisation. The combination of these two emergency services would add to the efficiency of each and could be worked conjointly far more economically than separately, as has been already proved in many towns where this arrangement exists. With so many splendid examples of what is done elsewhere at home and abroad, that London is still without an adequate ambulance service for humanely helping those in our streets who through sudden illness or accident are unable to help themselves, is a grave reproach to every public-spirited individual in the metropolis.

I am, Sirs, yours faithfully,

ARTHUR JAMES,
Honorary Secretary, Metropolitan Street Ambulance Association.
Gloucester-terrace, Hyde-park, W.

THE ETIOLOGY OF MALARIA.

To the Editors of THE LANCET.

SIRS,—On reading in THE LANCET of Nov. 19th, p. 1452, your correspondent's account of Professor Baccelli's remarks upon "the modern doctrines regarding the etiology of malaria" at the Fourteenth Annual Congress of Internal Medicine my feeling was one of astonishment at his attitude in regard to a subject the essential details of which are now beyond dispute. Such scepticism at this date on the part of an Italian is, to say the least, disconcerting. Why should not the well-known discoveries of Ross and of Professor Baccelli's own Italian school "destroy at a stroke the conception of malaria which has been handed down to us for generations and which was founded on observations of physicians of the highest attainments who dedicated their lifetime to the study of the subject." What did the said "physicians of the highest attainments" know of parasitology previously to about 1880, the date of Laveran's discovery. Does Professor Baccelli really mean to doubt the existence of the malarial parasite or that it is the cause of the disease? Professor Baccelli contends that the "mosquito theory" fails to throw light upon certain severe outbreaks connected with ricefields and marshes situated at long distances from the haunts of *anopheles*. I maintain that he cannot specify a single such outbreak recorded by any person competent to investigate the subject. It has, no doubt, often happened that collections of persons working in ricefields or marshes situated long distances from the haunts of *anopheles* have been subject to outbreaks of malaria if a week or so previously they have been in the region of infected *anopheles*. Why, Professor Baccelli is reported to ask, should it be a rule of prophylaxis to keep indoors after sunset in spite of the fact that *anopheles* lives by preference in side dwelling houses? In regard to this we have yet to learn that this is a rule of prophylaxis. It certainly was a popular notion at one time. Then he asks, how account for cases of malaria on board ship? Anyone who has travelled by the river steamboats in the African tropics knows how frequently the cabins are infested with *anopheles*, and others besides myself have found infected ones amongst them. May not the

passengers on those boats soon afterwards be at sea? I have travelled from Karachi to Trieste with both *anopheles* and *culex* in the saloon, the latter troublesome at meal times during the whole voyage. How account, he says, for the diminution of malaria in towns after the water-supply has been improved? What pages have been written on this subject. Professor Baccelli is very much mistaken in thinking that it is always improved in these circumstances. In India it is usually just the reverse, as most Indian medical officers can testify. Why? Because in place of a few wells there are erected a multitude of standpipes, each of which is through carelessness left running frequently all night, with the result that a nice little marsh and patch of green grass are formed where *anopheles* can breed in peace and plenty. Or, again, for the fact that malaria can be contracted in deserts? Every desert has its water-holes and I have frequently seen these crowded with *anopheles* larvæ although the water was so loaded with salts as to be almost undrinkable. Every traveller has to pass that way on account of the water, and near by, it may be, there is a shed or caravanserai where *anopheles* can be found in scores. Amongst the travellers may be one or more with gametes in their blood from attacks contracted elsewhere. In fact, all the conditions necessary for a virulent focus of malaria may be present in a desert.

Professor Baccelli cannot mention an instance of explorers or others having suffered from malaria in uninhabited places unless they had previously suffered from the disease or had been a week or so previously in the haunts of *anopheles*. It is possible that malaria may be transmitted from monkeys to man by the agency of mosquitoes, but as yet there is no positive evidence on the subject. What Professor Baccelli means by "spontaneous" malaria I cannot guess. He says that if *anopheles* are the only carriers of malaria how comes it that but a small percentage become infected by sucking malarial blood and become capable in their turn of infecting healthy persons? No one asserts that the mosquito is the only carrier of malaria but, on the other hand, no one has brought forward the least evidence as yet to show that the disease can be transmitted by any other agency. Professor Baccelli is apparently unaware that only certain species of *anopheles* are capable of transmitting malaria. *Anopheles Rossi*, for example, one of the commonest mosquitoes in India, apparently does not convey it. Infection results in 100 per cent. of cases where malarial blood has been injected by means of a needle into healthy persons, says Professor Baccelli. He seems to forget that only one phase of the parasite, the gamete, which appears in the blood only towards the close of the attack or after it, is capable of undergoing development in the mosquito and producing an attack when the insect injects it into the blood of another person. If the blood itself is inoculated direct any of the phases of the life-cycle of development which goes on in man may produce an attack, and of course much sooner than when the gametes are transmitted *viâ* the mosquito. The remarks attributed to Professor Baccelli with reference to certain epidemiological facts of importance in connexion with the marshes of Fucecchio that weigh against the "mosquito theory" are ambiguous, and with all respect to him I maintain that his statements are not substantiated. The distribution of *anopheles*, he states, is not parallel to that of malaria either geographically or in time. Where malaria is found there also are malaria-bearing species of *anopheles*. With regard to the relation of seasonal incidence of *anopheles* with that of malaria, no two places are alike, and no rule can be laid down. It, moreover, is often quite impossible to distinguish recurrent from first or fresh attacks.

Other difficulties in the way of the "mosquito theory" in the professor's view are the length of the period required for the development of the attack after the mosquito bite (about ten days) as compared with the shortness of the interval (often only three or four days) required for the newcomer in a malarial district to contract malaria. Professor Baccelli admits then, after all, that mosquitoes do carry malaria, but his statement that the newcomer requires less than half as long to develop an attack after being bitten as the old-stager needs, I think, confirmation. How explain, he asks, the sudden outbreak of numerous cases, almost all primary, immediately after a downpour of rain? If this ever occurred how does Professor Baccelli propose to prove that the two occurrences were connected with each other?

Surely your correspondent is in error when he reports Professor Baccelli as saying that Laveran thinks that the parasite may undergo its development in the *anopheles* alone or that Ross ever went beyond the bare suggestion that by means of the black spores it is capable of continuing to exist in the outside world independently of living organisms; his subsequent experiments amply proved that this was not so.

Finally, Professor Baccelli states that Ross speaks of having seen cases of malaria arise in persons who had drunk water containing mosquitoes and their larvæ. All I can say is I have seen attacks of malaria arise in persons who had drunk too freely of water not containing mosquitoes or their larvæ. I have ventured to offer the foregoing criticisms in the hope that they may to some extent counteract the effects that a communication so obviously out of harmony with present-day knowledge may have upon those not yet thoroughly conversant with this intricate and interesting subject, the main points of which have been fully investigated and discussed *ad nauseam*. I am, Sirs, yours faithfully,

Liverpool, Dec. 3rd, 1904. C. CHRISTY.

THE EVOLUTION OF MAN'S DIET.

To the Editors of THE LANCET.

SIRS,—It is indeed refreshing to see at last a thorough investigation of the evolution of diet. It seems incredible that the subject should hitherto have been almost entirely ignored, especially as it would appear to throw so much light on the difficult problems of dietetics. As we recognise the importance of Dr. H. Campbell's investigation it is all the more necessary to subject it to criticism in the hope of either correcting any inaccuracies or of having one's own beliefs or interpretations of his views rectified. Thus, then, while expressing a hearty sympathy with the trend of Dr. Campbell's investigation, I venture to refer to one or two inferences which we may not be inclined to accept without further elucidation.

Dr. Campbell seems to be of the opinion that man "has lost the power of digesting in the unprepared state all but the very choicest varieties of wild vegetable food." It would also appear that he considers man has to a large extent lost the power of digesting cellulose, while at the same time he assumes the probable existence among anthropoid apes of "special powers" of coping with cellulose. Now I fail to see how this loss of power could possibly have come about or sufficient evidence that it has been lost. In the first place if it be said that the loss of the power of digesting cellulose might be assumed to have resulted from natural selection having caused a survival of a larger number of those who did not possess the power of digesting cellulose, we reply that this seems rather incredible, as even at the present time the possession of the power is a positive advantage and much more would this be the case in primitive times when food was less refined and prepared than it is at present. Or, again, if it be maintained that the power had been lost, as natural selection being in abeyance the power to digest cellulose deteriorated, we reply that this can hardly be assumed, as the power to digest or to manipulate cellulose is one of the earliest established and therefore ineradicable characters; and, moreover, as I have indicated above, the power to digest cellulose must always have been of positive advantage to its possessors. Lastly, it might be urged that the power had been lost by disuse and the inheritance of this acquired negative character but this possibility is excluded as we admit with Dr. Campbell that acquired characters are not inherited. But is the idea that man has a less ability to cope with cellulose not a mistake? I am inclined to believe that man has it in his power to become able to digest or to cope with cellulose to all intents and purposes as efficiently as the anthropoid apes. If we consider the simple fact that cellulose is not digested chemically in either man or anthropoids practically all we have to consider is the ability to masticate and to transmit it. Thus all that is required is a more muscular intestine and especially a more efficient masticatory apparatus. Dr. Campbell mentions as having been insisted on by Dr. A. Keith that the only essential difference between the digestive apparatus of man and anthropoids is a difference in muscularity and also agrees with me "that we have it in our power to rear a race having teeth every bit as good as our primitive ancestors." If, then, the teeth could be restored to their primitive efficacy equally, I believe, could the muscularity of the jaws and of the stomach and intestines. It is difficult to realise how absolutely what we may call the training of the jaws and stomach is perverted in present-day man. The anatomical, the physiological, and the instinctive peculiarities of children suggest that at a very early age—say, at

the eruption of the incisor teeth—the child of our primitive ancestors was adapted to pierce, to gnaw, and to suck the fruits and shoots with which it was supplied and as some few shreds of cellulose were sure to be swallowed then indeed the transmission of cellulose was a function early imposed upon the intestines, while the enormous amount of gnawing and sucking which must have been necessary for the primitive child to extract a sufficiency of nutriment to supplement the decreasing supply of milk amply accounts for an enormous development of the jaw muscles. When we contrast this with the modern pap diet from which every particle of cellulose which demands mastication has been most carefully eliminated we observe that the change in the character of the food begins with weaning and is, I believe, amply sufficient to account for the marked difference in the muscularity of the masticatory apparatus and stomach.

I am, Sirs, yours faithfully,

Wimpole-street, Dec. 12th, 1904. J. SIM WALLACE.

CANCER OF THE CERVIX COMPLICATING LABOUR.

To the Editors of THE LANCET.

SIRS,—I would not have ventured to write again on this subject were it not necessary for me frankly to apologise and to express my regret to Dr. Herbert R. Spencer for my careless statement that at the recent discussion at the Obstetrical Society he did not bring forward a case of his own to support his view that the Porro operation was safer than conservative Cæsarean section in inoperable cases of cancer of the cervix complicating labour. Dr. Spencer did relate such a case, with a successful result, and I much regret that I confused it with another case where, owing to labour being obstructed by cervical cicatrices, he had performed a Porro-Cæsarean operation two years after amputation of a cancerous cervix. This fact strengthens his argument and to that extent weakens mine. Dr. Spencer and I have gone carefully over Porro's report and have extracted from it all the Porro-Cæsarean operations with extra-peritoneal treatment of the stump, and we find that there were in all 35 cases, with 12 deaths—34·3 per cent. No statistics of conservative Cæsarean sections are given.

As regards Sarwey's statistics—viz., 33 cases of conservative Cæsarean section, with a mortality of 60 per cent., and 24 cases of Porro-Cæsarean operations with a mortality of 54 per cent., Dr. Spencer says that the latter group of cases includes some hysterectomies with intraperitoneal treatment of the stump. I quote Sarwey's exact words: "Fälle von Porro's Kaiserschnitt (Werth, Leopold, Fehling, Zweifel, Kehrer), bei inoperablem Carcinom ohne weitere operative Eingriffe niedergelegt." As Sarwey gives neither details nor references it is not possible to be sure whether he speaks of Porro-Cæsarean operations in the original meaning with the stump treated extraperitoneally, as I assumed, or whether he is adopting the looser meaning of "Porro" as now used in "foreign statistics"—e.g., Porro Report, 1901—which includes not only intra- and extra-peritoneal hysterectomies but even panhysterectomies. Dr. Spencer has drawn my attention to the fact that Zweifel has published two cases of Cæsarean hysterectomy with intraperitoneal treatment of the stump, with fatal results, as one would expect in such cases as these. If these are included among Sarwey's cases the statistics cease to be of any comparative value for our present purpose.

Further experience will prove which operation is the safer and this correspondence is merely an attempt to clear up some of the doubtful points bearing on the subject. At present the statistics of published cases are distinctly in favour of Dr. Spencer's view, but the numbers are very small. I am, Sirs, yours faithfully,

AMAND ROUTH, M.D. Lond.

Manchester-square, W., Dec. 13th, 1904.

ANOMALIES IN THE APPLICATION OF THE DUTCH PUBLIC HEALTH ACTS.

To the Editors of THE LANCET.

SIRS,—I was struck by an annotation under the above heading in THE LANCET of Dec. 3rd, p. 1585, and I beg to offer some short remarks about it. You say that the chief inspectors are not bound to pay attention to what the chairmen of the municipal boards of health say and often enough take no notice of their remarks. The natural consequence would be a great amount of dissatisfaction. Now I am one of these chief inspectors. There is not one in each of the provinces, as you state, but we are only four in the whole country and as such members of the Central Board of Health that sits in Utrecht. In this quality we hold a regular intercourse and meet very often. For my part of the business I never was aware of any amount of dissatisfaction in the way you mentioned and if such was felt in other parts of the country I ought to have heard it, but I never did. In fact, there is no serious dissatisfaction at all. Every organisation will have its defects and leave something to be wished for, and so does ours. But considering this organisation is new and the time of its working too short to be sure of its effects, it can fairly be said that the Public Health Act works well and will do so still more in the future. All the complaints in your annotation issue from the same source and there cannot be a serious reason to think that this bad meaning represents the prevailing opinion. Such trifling conflicts as are referred to in your annotation will happen always and everywhere and can only be considered as the results of a momentary misunderstanding. Complaints to this effect are merely superficial and personal and never reach to the very root of the question. The only one that touches the principles of the organisation is that concerning the chief inspector's preventing the boards from holding meetings to combat tuberculosis. This complaint was unjust, however. In dealing with the matter as he did my colleague was right, I believe. The municipal boards of health are part of the organisation and if they wish to act as such, not as private persons, they are bound to subject themselves to the regulations of the law. If they were allowed to disregard the supervision of the chief inspector and to assemble in a body of their own independent of that official the Act would be idle and the whole organisation would be endangered.

I would trespass too much on your space and also take too much of my own time if I dwelt longer on the subject, as I should willingly do, but I hope these few remarks will suffice to convince you that there is another manner of looking at the matter, and especially that there is no official apathy on our part or improperly clinging to "red tape." The British Empire has a high and well-deserved reputation for the management of public health and I should be very sorry if British readers could think that our country was acting so much in the wrong way as the annotation in your esteemed journal suggested. To prevent this I ventured to write to you. I am, Sirs, yours faithfully,

Dr. M. W. PYNAPPEL,
Chief Inspector of Public Health for the Northern Provinces.

Zwolle, Netherlands, Dec. 6th, 1904.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

To the Editors of THE LANCET.

SIRS,—It may interest some of your readers to know that at its meeting on Dec. 9th the council of the London and Counties Medical Protection Society decided to impose an entrance fee of 10*s.* upon all candidates elected members of the society on or after Jan. 1st, 1905, and until further notice. The annual subscription (10*s.*) remains unaltered. The council decided to take this step chiefly for these reasons. On Jan. 1st, 1904, the number of members (including dentists) on the books of the society was 2682. Since Jan. 1st, 1904, the new members elected (including dentists) number 579. The society's reserve fund is now in this position:—

	£	*s.*	*d.*
Present investments	1796	15	4
Awaiting investment	600	0	0
Cash	1	7	0
	£2398	2	4

No similar society in England could afford to spend on each of its members as much money as could be so spent by the London and Counties Medical Protection Society.

For these reasons the council thinks that to require newly elected members to pay a small entrance fee is merely an act of bare justice to the members of the society who for years have exercised self-denial in order that the funds of the society might be placed on a fairly sound basis. The trustees of the society's reserve fund are Sir William H.

Broadbent, Bart., and Mr. John Tweedy, President of the Royal College of Surgeons of England.

I am, Sirs, yours faithfully,

G. A. HERON,

Honorary treasurer and chairman of council of the London and Counties Medical Protection Society.

Harley-street, W., Dec. 10th, 1904.

BOURNEMOUTH AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—The dreary dulness of London enveloped in chill fogs has driven many invalids to seek medical advice as to where they could without undue expense or fatigue find some desirable health resort in a sheltered situation and not a few have been recommended to go to Bournemouth. The medical practitioner if asked why he named Bournemouth would probably reply that the climate was remarkable for the equability of its temperature, that the subsoil carried away the moderate rainfall with great facility, rendering the place exceptionally dry, that the air was balmy and health-giving, and that the town was surrounded by pine-forests. But this is such an inquiring age that the medical man of the present time must be prepared if necessary to give reasons for the faith that is in him. Your correspondent therefore from his snug quarters in one of the many comfortable hotels at Bournemouth forwards a few points he has noted during his stay in the place which will interest the family physician pressed unduly by the inquisitorial proclivities of the up-to-date patient.

The first fact deserving of remark is the care taken by the authorities concerned in the health of this resort. Under the watchful guidance of the medical officer of health every measure needful to secure the well-being of the community is carried out and the advice bestowed on the public is as refreshing as it is practical; for instance, upon a school being closed on account of a case of a very mild form of scarlet fever many people went gossiping about saying that such closure must mean a serious outbreak of infectious disease. But these scaremongers were soon brought to book and the official rebuke ran as follows: "An erroneous impression such as this based on incomplete knowledge of the facts tends to propagate a scare which alarms the unknowing." The milkmen in Bournemouth can find in its public records that milk may be "an opaque fluid which disguises a multitude of impurities" but they will also meet with the following significant passage: "Until recently those impurities have received very little attention." There is much virtue in the words "until recently," for they convey to the initiated the satisfactory intelligence that the milk of Bournemouth is above suspicion. The authorities are fully alive to the fact that some of the milk is coloured with annatto to suit the taste of a few who will have "rich-looking" milk and they can only regret that provided the colouring matter is innocuous the law cannot interfere. The visitor can safely depend on a prescription being made up properly in Bournemouth, for on a test prescription being presented at seven shops the drugs used were found on examination to be of "a highly satisfactory degree of purity." The bakers of Bournemouth are recorded to have taken prompt action on receiving a copy of the new Act of Parliament demanding structural alterations necessitating considerable expense and inconvenience. It is rare to find it officially stated that anyone has "taken prompt action" in such circumstances, but the clean lime-washed bake-houses of Bournemouth bear testimony to the efficient and public-spirited action of the bakers in complying with the somewhat drastic requirements of Parliament. Nothing escapes the official eye at Bournemouth and the defect in the building by-laws which allows houses to be built without ashbin accommodation will receive attention in due course and as your correspondent finishes these remarks the county borough sanitary inspector can be observed thoughtfully regarding the extensive improvements carried out on the premises of one of the few ice-cream makers in Bournemouth; his officers also inspect any place where ice-cream is made in the borough, however small the quantity.

I am, Sirs, yours faithfully,

Dec. 12th, 1904. AN OCCASIONAL CORRESPONDENT.

A MEDICAL DEGREE FOR A MAYOR.—The University of Strasburg has conferred the honorary degree of M.D. on Herr Back, the mayor, in recognition of his valuable services in promoting the improvement of the sanitation of the city.

SANITATION AT ST. LOUIS, MISSOURI.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

UNHAPPILY for America the administration of the government of towns has been converted into a matter of business. To be elected as member of a municipality is not looked upon as an honour but as a money-making speculation. It is an opportunity of conferring concessions and privileges and of receiving handsome gifts or commissions in exchange. For this process the Americans have coined the word "graft" and when a post is offered the candidate generally inquires whether there is much "graft in it." Such scandals have occurred in England, in France, and probably in all other countries, but they are exceptional, carefully concealed, and severely punished when they are discovered. In America they are widespread, notorious, and rarely punished. But even for America the city of St. Louis holds a prominent position, first for the enormity of its "graft" grievance and, secondly, for the altogether unprecedented prosecutions and punishments that have ensued. Some time ago one of the two parties which disputed in public for municipal honours but in private came to terms over the plunder thought that they would improve their prospects and somewhat tarnished reputation by placing on their list of candidates the name at least of one person of undoubted honour and ability. For this purpose they asked Mr. Joseph W. Folk whether he would allow his name to be brought forward as a candidate for the post of attorney of the city. Mr. Folk consented but at the same time declared that if elected he would act according to his conscience. The corrupt ring thought that this pronouncement did not mean anything but was only a little of the usual electoral talk. To their great consternation events proved that Mr. Folk was in earnest. When once he had collected the necessary evidence he proceeded to prosecute indiscriminately the members of his own party as well as those of the opposition. They were accused of betraying the public trust and of various forms of bribery and corruption. Some of the municipal councillors sought safety in flight, while others were caught and are now languishing in jail.

In these circumstances when I called at the city offices to obtain information concerning the sanitary administration of St. Louis I found matters in a state of confusion. Many of my questions could not be answered, the excuse given being "the recent municipal trouble." Thus it is that the last printed annual report of the health commissioner is for the year 1902 and it has not been possible to issue any further report since that time. This is all the more regrettable as the report for 1902 is very complete, elaborate, and interesting. The mortality was then set down at only 17·72 per 1000, and out of a total of 10,601 deaths 1399 were due to the principal zymotic diseases. Of these latter typhoid fever was the cause of 198 deaths and the report further says: "We can estimate the actual number of cases of typhoid for the last year at from 3500 to 4000, a figure auguring very badly for our water-supply." The cases actually reported did not amount to 2000 but it is believed that much laxity prevails and only a portion of the cases are notified to the municipal authorities. Statistics are published going back to the year 1867 from which it would appear that typhoid fever has been endemic in St. Louis. During that period there have been 5681 deaths from the disease out of a population that has increased from 220,000 to 598,000. The average for the 34 years has been 167 deaths per annum but we find 294 deaths recorded in 1868 when the population was only 230,000 and 202 and 269 deaths in the two following years. Then in 1892, when the population was estimated at 500,000, there were 441 deaths from typhoid fever. In the following year there were 215 and since that time the figure has always been below 200. This, however, is much too high and the water-supply is blamed as the principal cause. Also legal proceedings have been taken by the city of St. Louis and the State of Missouri against the State of Illinois and the sanitary district of Chicago to obtain an injunction against the Chicago Drainage Canal. But the figures just given show that typhoid fever made

greater ravages at St. Louis when the town of Chicago still emptied all its drainage into Lake Michigan. The city of St. Louis derives its water-supply from the Mississippi below the junction of the Missouri with that great river. On the Mississippi, some ten miles above the St. Louis water intake, there is the town of Alton with 15,000 inhabitants, and about 15 miles also above the intake and on the banks of the Missouri there is the town of St. Charles with some 10,000 inhabitants. Higher up both rivers there are further sources of contamination and there is also the river Illinois which brings to the Mississippi the drainage of Hardin, Kampeville, and many other towns. It is into a tributary of the Illinois river that the drainage of Chicago is now being emptied so that Lake Michigan shall no longer be contaminated. The question, of course, rests on the amount of water the Mississippi contains and whether it suffices to purify all the filth poured into the river. It seems quite certain that the natural process of purification so far as the contamination caused by the nearer towns is concerned could not be accomplished before the St. Louis water intake is reached. The St. Louis health authorities themselves have denounced their own water-supply and have recommended that it should be boiled before it is used for drinking purposes.

Now, however, it is said that a notable improvement was effected in time to save the visitors to the World's Fair from the great danger to which they would otherwise have been exposed. There are large tanks or reservoirs where the muddy water of the Mississippi is kept so that the heavy particles held in suspension may settle to the bottom. To further insure the process of precipitation iron and lime are added. This results, it is stated, not only in the clarification of the water but in the removal of 90 per cent. of the bacteria which it contains. If this is still insufficient it is nevertheless a great improvement. But even if the water-supply was all that could be desired it is probable that there would still be many cases of typhoid fever and other zymotic diseases in the city. It is a very ramshackle place. Even in the most important streets and in the centre of the town there are numerous miserable tumble-down hovels. Many houses are undoubtedly of the slum type and can be recognised by their narrow, dirty stairs that are seen from the street. There are many very wretched overcrowded houses where the negroes die like flies. Indeed, the coloured population is a source of much anxiety and difficulty. The more intelligent coloured people go east. Thus, while the last general death-rate given is put down at 17·72 per 1000 it is calculated that it amounted to only 16·83 among the white population, but was equal to 30·86 per 1000 among the coloured population. A terrible amount of poverty and ignorance prevails among the coloured population. They gravitate to all the unhealthy districts and the low-lying ground where formerly swamps existed.

Perhaps the best phase of the sanitation of St. Louis is the energy and promptitude with which cases of infectious disease are removed and the premises disinfected. At the time of and after the removal of a small-pox patient all who have had any connexion with him are vaccinated and closely watched for two weeks. When the first week has elapsed their temperature is taken every day; thus, if the disease has spread the new cases are in hand at the very first symptom. Then a printed notice is placed outside any house where there is infectious disease, warning the public to keep away. The removal without permission of such a notice is qualified as a misdemeanour and is punished by a fine of from £1 to £5. In dealing with diphtheria a serious mishap occurred. Several children died from tetanus, the toxin of this disease having found its way into the diphtheria antitoxin. The horse bled on Sept. 29th to produce serum was killed on Oct. 2nd because it was found to be suffering from tetanus. Nevertheless, the serum taken on Sept. 29th was not destroyed. Owing to this "inexcusable negligence" the poisonous serum was given to the medical practitioners of the town from Oct. 10th to 23rd and four children died from tetanus after they had been inoculated with what was supposed to be antidiphtheria toxin. This fatal occurrence and the "graft" scandals have not enhanced the reputation of the city. Then came the numerous stories told of the extortions practised on those who went to the World's Fair; so that in all these circumstances it is not surprising if the number of visitors has fallen short of the anticipations and hopes originally entertained.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Small-pox in Madras.—The Pilgrimage to Mecca.—Fresh Plague Measures for Bengal.

THE return of deaths from small-pox in the city of Madras during the last 30 years furnishes strong testimony to the efficacy of vaccination. Before 1884 the annual deaths amounted to hundreds and even thousands, but from June 1st, 1884, when the compulsory order came into force, the diminution each year has been extraordinary. In only three years has the number exceeded 100 and during several years less than ten deaths were recorded.

Few people know the fatherly care which the Government of India exercises for the comfort and safety of the pilgrims to Mecca. These people come from all parts of India—men, women, and children—with much baggage and for the most part in a very dirty condition. The Government obtains tenders for the passage, 16 feet of room are allowed for each passenger, and the ship carries a medical officer. As soon as the camp in Bombay city is ready a batch of pilgrims is admitted. Here they have all their things disinfected and elaborate precautions are taken concerning their tickets and means of identification. They are all medically examined. 1000 or more are passed through in a day and they are then taken to a camp at Pir Pao, eight miles away. This camp is a model village where the pilgrims stay for ten days usually, but this year the period has been reduced to five days. They then embark for Jeddah. Notwithstanding all the excellent precautions adopted before they leave India the Turkish Government has a rule by which the pilgrims are kept in quarantine at the island of Kamaran for ten days before being allowed to land at Jeddah. What happens to the poor pilgrims then is not published but from all accounts they are cheated and robbed every step of the way to Mecca and back.

The Government of Bengal has just issued a resolution superseding the provisions contained in the Bengal Plague Manual and conveying fresh instructions for the administration of plague measures in the province. All the penal provisions have disappeared and the so-called preventive measures are: (*a*) that municipalities are instructed to place their general conservancy arrangements on an adequate and efficient footing, especially extending their operations to the surroundings of houses of small towns, and villages are to be *encouraged* to do likewise; (*b*) in municipalities and villages as much as possible is to be done *to encourage* the destruction of rats and mice and the poison known as "rough on rats" is officially recommended for the purpose; and (*c*) inoculation is *to be encouraged* but not pressed upon the people. It is hardly necessary to refer to the enlisting and organising of unofficial help as this has everywhere proved hopeless. The preliminary arrangements in anticipation of an outbreak comprise the construction of temporary quarters for all persons evacuating their houses, but as no compulsion is authorised to be taken this instruction is almost certain to prove useless. The measures to be adopted on the outbreak of plague are disinfection, destruction of infected material and evacuation of dwellings, and removal to plague hospitals, but as nothing is to be compulsory the whole policy depends upon the will of the people. Concerning disinfection the Government has expressed the opinion that perchloride of mercury has failed of complete success and it now recommends burning of cow-dung cakes, straw, and so on, on the floors. A desiccating apparatus is to be devised. Chemical disinfection is to be available *when asked for* and phenyl is officially recommended. Even destruction of infected clothing, &c., is only to be encouraged by the offer of compensation and no compulsory measures will be adopted. With regard to evacuation encouragement is again relied upon chiefly by providing quarters. Removal to plague hospitals must only be adopted for vagrants and friendless strangers as in no other cases is pressure to be brought to bear. The other points in these noteworthy instructions refer to organisation of charity and various expenses of plague administration. Reviewing this new policy it may be said that these fresh instructions are wholly permissive upon the will of the people and depend absolutely upon what the people can be induced to do by encouragement. All experience shows that in sanitary matters they will do little or nothing.

Nov. 13th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Retirement of Professor B. C. A. Windle.

Professor Windle has received a number of marks of kindness from colleagues and students in view of his departure from this city. The annual dinner of medical students, an event which always occurs about this time of year, was taken advantage of to present him with a piece of plate subscribed for by past and present students. The Chancellor of the University, the Right Hon. Joseph Chamberlain, and Sir Frederick Treves were both present on this occasion and proposed, the one the toast of "Past and Present Students," and the other that of "The Birmingham Medical School." Nearly 300 guests sat down to this dinner and many who wished to do so were unable to obtain tickets. After the conclusion of the last meeting of the Faculty of Medicine at which Professor Windle presided his colleagues presented him with a silver salver and set of candlesticks. The presentation was made, in the name of the rest of the members of the Faculty, by Professor Jordan Lloyd who said that he hoped that the gifts which were offered would remind the Dean of his friends in Birmingham when he was far distant from them and called attention to the fact that, in addition to the inscription of presentation which appeared upon the salver, the names of all the members of the Faculty were inscribed on the under surface. Professor Windle thanked his colleagues for their beautiful gift, which would always be a pleasure to himself, his wife, and his children, and wished every possible success to the Birmingham School in the future. The staff of the University, together with certain private friends of the two professors, have also entertained at a banquet Professor Windle and Professor MacNeile Dixon who has recently removed to Glasgow. The health of the two professors was proposed by the chairman, Sir Oliver Lodge, and responded to by the two guests. I am informed that Professor Windle expects to be settled in his new home at Queen's College, Cork, by Christmas Day.

Chair of Anatomy in the University.

The council has appointed to this position Dr. A. Robinson, at present professor of anatomy at King's College, London. No steps have, I understand, been as yet taken to fill up the position of dean of the Medical Faculty, also rendered vacant by the resignation of Professor Windle. By the charter of the University this is a life post and carries with it a seat on the council of the University.

The Welsh Water.

When the new supply of water first began to make its way through the pipes into the houses of the inhabitants of the city and district its advent was at once to be recognised on account of its very peaty colour. Even in a small glass water-croft it is distinctly yellow and when seen in greater bulk, as in a bath, it is like a peaty Highland stream. It seems, however, that it is only its appearance which is against this water, for at a recent meeting of the water committee a report was presented from the city medical officer of health in which he stated that during the month of November he had been collecting samples of the water in all parts of the district, having had a man specially engaged in this work, in order that the quality of the new supply might undergo a complete test. He had analysed the samples thus obtained and was able to report that the water supplied from Frankley, where the main reservoir is situated, and also as supplied to the houses in the city was, both from a chemical and bacteriological point of view, "entirely satisfactory." The report went on to say that there was a certain amount of colouring in the water and it referred to the effects produced by allowing the water to stand and by boiling it. On the latter point Dr. J. Robertson said that boiling the water made it much lighter in colour. A small amount of brownish deposit composed of peaty matter and a little iron took place. He pointed out, however, that the deposit from the older supply was probably about ten times as great as that obtained from the Welsh water, but being lighter in colour it was less noticeable than that in the present water. The general conclusion of the report was that the water was excellent and in every way save that of colour superior to that supplied up to a few weeks ago.

School for Defective Children.

At the last meeting of the education committee of the city a proposition was brought up from the sites and buildings committee for the purchase of a site for a school for mentally deficient children near Kenilworth. It was suggested that an area of about 22 acres should be acquired for a sum of £1700 and that a school should be erected thereon capable of containing 80 children, the plans being so prepared that further accommodation could be provided when required. Mrs. Pinsent, chairman of the special schools subcommittee, said that this matter had been on several occasions before the authority. The subcommittee had found great difficulty in securing a suitable piece of ground. They could not go too far from Birmingham, they must be reasonably near to a railway station, have a good healthy site, a sunny aspect, and a perfect water-supply. It was only at Kenilworth that they had come across a suitable site at a reasonable price. The subcommittee could see even more clearly than it did a year ago that there were certain children whom it was impossible to educate in a day special school and their presence in a day special school rendered the work more difficult. Those children came from the worst and most degraded homes and owing to their mental defects were particularly susceptible to bad influences. They were insufficiently clad and often so neglected and dirty that it was impossible to instil common decency into them. Those children must be removed from all opportunities of vice or they developed criminal tendencies. There were also mentally defective children who were at the same time confirmed truants and they could not be dealt with in the ordinary manner because industrial and truant schools did not take mentally affected children. There were some few cases which had never been admitted to special schools at all, because it was felt that the training which could be given them there was entirely inadequate. None could be classed as idiots and imbeciles and they could not be dealt with under the existing Idiots and Lunacy Act. Most of the children were capable of doing some simple form of manual employment and it was the subcommittee's belief that if trained in a boarding school they could be passed on at the age of 16 years to an industrial colony, where, with the training they had previously received, they would be fairly satisfactory inmates and contribute largely to their own support. The Birmingham, Aston, and King's Norton guardians had already formulated a joint scheme for such a colony and had obtained the consent of the Local Government Board. That scheme would carry on the work of the boarding school and the two schemes together would in the long run prevent the birth of another generation of defective children. They believed the scheme they suggested would tend to lighten the burden on the community. Birmingham was now supporting a generation of mentally defectives in the workhouses or in the prisons, which was not economical. Under the scheme proposed the children would be prevented from becoming paupers and criminals and would be largely self-supporting. An amendment was proposed that the matter should be referred to the subcommittee in order that it might bring up a detailed scheme with estimate, but in the end this motion was lost and the original proposal was carried.

Dec. 13th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Tropical Diseases: A Big Liverpool Expedition.

A DEPUTATION of scientific gentlemen connected with the Liverpool School of Tropical Medicine, which is sending out another expedition to study tropical diseases, was recently received by the Colonial Secretary. Sir Alfred L. Jones, K.C.M.G., the President of the school, introduced the deputation, which included Professor Rubert Boyce, F.R.S., Colonel Giles, late I.M.S., Sir Ralph Moor, Dr. Evans, Dr. M'Connell and Dr. Wolferstan Thomas (the latter two gentlemen representing Canada), and Mr. A. H. Milne, the secretary of the school. Sir Alfred Jones explained that the expedition was the largest of the kind ever promoted. Professor Boyce, Dr. Evans, and Dr. Clarke were going to Sierra Leone, Gambia, &c.; Colonel Giles and Dr. M'Connell would investigate the Gold Coast, Lagos, and Nigeria; while Dr. Wolferstan Thomas and Dr. Anton Brieul of Prague would go to the Amazon to conduct researches in yellow fever and malaria. The expedition was really promoted in compliment to Sir William MacGregor, whose excellent

work in West Africa for the Empire they all appreciated. Its cost was defrayed by Liverpool merchants and the idea underlying the movement was to supplement and not to criticise or to interfere with efforts already made in the same direction by other investigators. The Colonial Secretary, in a sympathetic reply, said that the contemplated expedition was of great interest and not without some peril to those embarking in it. He personally had endeavoured to the best of his ability to carry out Mr. Chamberlain's intention regarding tropical medicine and he attached the greatest importance to what had been done and was being attempted. No service could be more honourable than that directed to making more safe and useful those regions to which Englishmen went out on behalf of the Empire. The expedition fund was headed by a donation of £500 from Sir Alfred Jones and £200 from Mr. John Holt. Professor Boyce's party will sail on Dec. 14th, Colonel Giles's on Dec. 31st, and that to the Amazon early next year.

United Hospitals' Clinical Schools: First Annual Dinner.

The first annual dinner of the United Hospitals' Clinical Schools took place on Dec. 3rd at the Adelphi Hotel, Dr. William Carter presiding over a large attendance, consisting mainly of members of the medical profession. The guests included the Lord Mayor, the Lord Bishop of the diocese, Sir Alfred L. Jones, K.C.M.G., the Rev. John Watson (Ian Maclaren), Sir Edward Russell, and others. The toast of "The City and University of Liverpool" was responded to by the Lord Mayor for the city and by Professor B. Moore (the Dean of the medical faculty of the University). The latter remarked that the clinical school had become a big slice of the University. They must be in amity with the Royal Infirmary (which, by the way, had held aloof from the scheme). Circumstances might place them in rivalry but they hoped in the long run there would be an amalgamation. The decline in the number of medical students was becoming a national problem and it was necessary to have not only the money but the help and sympathy of the city. He asked those present to send their sons and nephews as students. There were about 600 medical men in the district and 25 or 30 of them retired every year. They had only two-thirds of that number joining the school as students and half of these were Welshmen. They had unsurpassed facilities. Manchester was not their rival; what they wanted was to be "upsides" with Edinburgh. They must make the fees easy so as to cater for the man who had brains but little money and with that they must combine good teaching. Other toasts followed.

Memorial to the late Sir William Mitchell Banks.

Preliminary steps towards the establishment of a fitting memorial to the late Sir William Mitchell Banks were adopted at an influential gathering held at the town hall on Nov. 29th. The Lord Mayor presided. The following resolution was carried:—

> That a committee be formed, to consist of the persons present at this meeting with power to add to their number, for the purpose of collecting subscriptions and determining the form that the memorial shall take; the Lord Mayor *ex officio* to be chairman, the town clerk and Professor A. M. Paterson to be honorary secretaries.

As to the nature of the memorial, at first it was suggested that beds at the Royal Infirmary, with which the late distinguished surgeon was so long connected, should be endowed; but the probability is that a lectureship at the University of Liverpool associated with the subject in which he was chiefly interested will be the form of memorial eventually adopted. Subscriptions amounting to £425 were announced at the meeting.

Insanitary Property in Liverpool: The Recorder's Decision in an Appeal Case.

The Recorder of Liverpool on Dec. 7th gave his decision upholding the presentment of the grand jury ordering the demolition of certain insanitary property condemned by the medical officer of health (Dr. E. W. Hope). After dealing in detail with the facts the learned recorder said the real question was whether the alterations that had been made in the house and that would, if necessary, be made in all the others were sufficient to remedy the defects existing at the time the presentment was made. He had had the advantage of inspecting the property and, in his opinion, the alterations would not be adequate to remedy the defects; therefore he thought the houses were still insanitary and the appeal would be dismissed but without costs, as the appellant had expended money and done her best in an honest endeavour to meet the requirements of the Act of Parliament. The medical profession in Liverpool have hitherto had the fullest confidence in Dr. Hope's judgment and his official actions have always been fully endorsed by them. It is gratifying to know that the views of the grand jury prevailed with the learned recorder. Had it been otherwise there can be no doubt that sanitary progress in the city would have received a decided check.

Windfall for a Liverpool Hospital.

At the Lancashire Court, sitting in St. George's Hall on Dec. 12th, before Vice-Chancellor Sir Samuel Hall, K.C., a petition was presented by the trustees under the will of the late Mr. George Fowler, a well-known Liverpool merchant, relative to points arising under the will of the deceased. Mr. Fowler bequeathed £20,000 for founding in Liverpool a hospital for incurables. The petition had relation to the administration of the £20,000 legacy for the foundation of the hospital. The trustees had come to the conclusion that the sum bequeathed was insufficient to found a hospital, but they were desirous of carrying out the testator's wishes by devoting that sum to the already existing institution in Liverpool known as the Liverpool Home for Incurables. It was explained to the vice-chancellor that the foundation of an additional hospital would possibly take the whole amount of the legacy, leaving the hospital so founded dependent upon voluntary contributions for its maintenance, and that such would inevitably detract from the contributions to the existing hospital, which is supported by voluntary contributions. It was desired to obtain the sanction of the court to make the gift to the existing institution. The vice-chancellor intimated that he was disposed to sanction the scheme.

Dec. 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Gift of £25,000 to the University of Edinburgh.

THE public of Scotland were informed on Tuesday morning, Dec. 13th, that their countryman, Sir Donald Currie, had intimated to the Principal of the University of Edinburgh, Sir William Turner, that he proposed to present to the University the handsome sum of £25,000. This gift would appear to be in part, at least, one of the results of an appeal made on behalf of the University for funds to enable the University to extend its laboratory accommodation for research purposes and also to provide funds for an extension of the teaching staff, particularly for the remuneration of a staff of lecturers. The gift appears to be free from irksome conditions, for it is left to the University authorities to appoint such lecturers as they may deem advisable from time to time. Permission is given to the University to use £5000 for the purchase of a site for new laboratories should it be necessary to use a portion of the gift for that purpose. Sir Donald Currie stated in his letter to the Principal that it was his desire to assist in placing the metropolitan university of his native land on a sound and prosperous financial basis and at the same time to aid the Carnegie Trust in carrying out one of the important objects which Mr. Carnegie had in view in his foundation of a trust for the Scottish universities. Sir Donald Currie has been in communication with Lord Elgin, who, it will be remembered, is chairman of the executive committee of the Carnegie Trust, with a view to have the money granted for a like purpose by the Carnegie Trust available for the session 1905–06. The intimation of this handsome gift was announced to the court of the University of Edinburgh at its meeting on Monday last, Dec. 12th. The court not only expressed its full sense of the important provision which the gift will enable it to make for the development of the teaching power of the University and recorded its grateful thanks to Sir Donald Currie, but it further decided to designate the fund "The Sir Donald Currie Lectureship Endowment Fund." It is needless to say that the academic public will await with interest the intimation of the mode of application of this fund.

Royal College of Physicians of Edinburgh.

At the meeting of the College held on Dec. 1st Dr.

John Playfair was elected President of the College, Dr. Thomas S. Clouston, Vice-President, and Sir Thomas R. Fraser, Sir John Batty Tuke, Dr. Charles E. Underhill, Dr. James Ritchie, and Dr. R. W. Philip were elected to the council. The council subsequently selected the examiners for the licence, the membership, and the diploma in public health, and made the following appointments for the ensuing year: Dr. Peter A. Young, treasurer; Dr. Harry Rainy, secretary; Dr. D. Berry Hart, librarian; and Sir John Batty Tuke curator of research laboratory.

Royal Medical Society, Edinburgh.

At a meeting on Dec. 2nd Dr. H. J. Dunbar delivered his presidential address, the subject being the History of Surgery in Edinburgh. He commenced by giving an account of the foundation of the University and of the two Royal Colleges and went on to discuss the three Munros and the disputes which at that time occurred between the physicians and surgeons. After alluding to John and Charles Bell, Liston, and Syme, he concluded by relating the circumstances connected with the origins of the old and new infirmaries. Dr. W. E. Carnegie Dickson proposed and Dr. H. D. Shepherd seconded a hearty vote of thanks.

Dec. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Ulster Medical Society: Annual Dinner.

THE annual dinner of the Ulster Medical Society was held in the Medical Institute, Belfast, on Dec. 3rd, Dr. W. Calwell, the President, occupying the chair. There was a large attendance of members and invited guests. After dinner the President proposed in happy terms the toast of "The King," referring to His Majesty's close connexion with the medical profession and to his visits to Ireland. Dr. John Campbell proposed "The Lord Lieutenant and Prosperity to Ireland" and spoke of the efforts of both Lord and Lady Dudley in ameliorating the condition of the poor and suffering of Ireland. Sir Otto Jaffé, Lord Mayor of Belfast, in responding, brought out the interesting fact that in the present epidemic of small-pox in Belfast not a single patient had been admitted into the small-pox hospital who had been revaccinated, and as an indication of his own thorough belief in revaccination and to show his admiration for the father of that practice he offered to present a bust of Jenner to the Belfast Medical Institute, which the President, on the part of the Ulster Medical Society, cordially accepted and thanked very warmly the Lord Mayor. The chairman then explained that the members of the Ulster Medical Society wished to mark their sense of obligation to Sir William Whitla who had, on condition that they kept it up, presented the Ulster Medical Society with that building in which they now met. Accordingly they arranged to present him with his bust, to be placed in the Medical Institute, and thus to commemorate his generosity. They asked Sir Lauder Brunton to unveil it and to propose the health of the donor. Sir Lauder Brunton then in an interesting speech referred to Sir William Whitla's good personal and professional qualities, to his generosity in giving such an institute to the members of the medical profession in Belfast, and concluded by unveiling the bust and proposing his health. Sir William Whitla, in responding, thanked the members, the artist (Miss K. Shaw), and Sir Lauder Brunton for the compliment paid to him and said it afforded him great pleasure to make such a gift to the medical profession. Professor J. A. Lindsay, in proposing "The Dublin Schools of Medicine," referred to the prestige and antiquity of the Dublin School, to the able men it had produced, and to the good work it had done on behalf of medical education. Mr. A. Chance (President of the Royal College of Surgeons in Ireland), Professor Walter G. Smith (Trinity College, Dublin), and Sir John W. Moore replied, all referring in complimentary terms to the Belfast School of Medicine. Mr. Chance spoke of the importance of the further endowment by the Government of the Irish medical schools as Ireland was a poor country and he deeply resented some recent attacks made on the teachers of these Irish medical schools. Professor Smith dwelt on the fact that admirable men had gone out to practise trained in Dublin and Belfast, while Sir John Moore said that if the President dined with the Dublin College of Physicians on next St. Luke's Day he would have an opportunity of taking snuff out of one of their most precious relics—Jenner's snuff-box. Dr. J. Walton Browne proposed the toast of "The Guests," to which Sir Lauder Brunton, the President of Queen's College, Belfast, and Sir Thomas Myles replied. Dr. Charles Kevin then proposed the health of the President, referring to his popularity, the confidence which the profession had in him, and his excellent management of the affairs of the society. The President thanked the company for the very kind way in which they had received the toast and concluded by giving a toast received with great enthusiasm—the health of Dr. Thomas Houston, the secretary of the Ulster Medical Society, who had spared no pains to make that evening a complete success. Dr. Houston replied. During the evening excellent vocal and instrumental music was much enjoyed.

The Dispensary Medical Officers of Ireland.

A case of much interest and importance to the dispensary officers of Ireland was concluded on Dec. 8th, when the Lord Chief Baron gave judgment. The case was tried in the King's Bench Division, the leaders of the Irish Bar were engaged, including the Attorney-General and Solicitor-General, and it occupied three days. Two dispensary medical officers, Mr. M. Keelan and Mr. M. Caraher, of the Ardee union, challenged the right of the Local Government Board to abolish a certain dispensary district in the union and to enlarge the adjoining districts of which the applicants were the medical officers. The Lord Chief Baron, in delivering the judgment of the court and in dismissing the application, said that the court must not be taken as pronouncing any opinion upon the vexed question as to what was the proper remuneration that should be allowed to dispensary medical officers. He said "that he considered that the Local Government Board had the power to alter dispensary districts when they were satisfied that such could be done without injury to the sick poor, but that he thoroughly appreciated the hardship that this would involve to both these medical gentlemen, especially to Mr. Keelan, who had worked up a private practice of £500 or £600 a year which he might have to give up or resign his position as a dispensary medical officer, but the rights of the medical officers were subordinate to the duties of the Local Government Board who had to see that the Medical Charities Act was efficiently carried out." The application of the medical men was accordingly dismissed with costs. The previous history of the trouble is as follows. Two years ago the Drumconrath dispensary of the Ardee union became vacant and the guardians advertised again and again but failed to find any candidate for the appointment at its former salary. The guardians then applied to the Local Government Board which refused to allow them to raise the salary and advertise the vacancy at £150. On the other hand, the Local Government Board held a local inquiry and determined to abolish the dispensary appointment and to merge the district with the adjoining ones. The board of guardians passed a resolution against this course and at the subsequent inquiry almost all the witnesses examined—clergymen of all denominations, members of the county and district councils, and gentlemen residing in the neighbourhood—agreed in condemning the proposed change in the dispensary districts. The Local Government Board was not influenced and made the change by sealed order.

Popular Public Health.

In contrast with the somewhat vague statements of the Resident Commissioner of the National Board the Catholic Truth Society of Ireland has made a practical move in issuing a small book entitled "A Sanitary Sermon," by Dr. J. E. Dowling, physician to St. Jarlath's College, Tuam. It has been most favourably reviewed by the *Irish Times* and other popular journals as being simple, interesting, and useful. Moreover, it costs only 1*d.* and is to be on sale at all Roman Catholic churches in the country. Its title is perhaps derived from the fact that the present Archbishop of Tuam has for years made it a practice to deliver one sermon annually on Health and Cleanliness.

Dec. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Academy of Sciences.

THE Academy of Sciences has just elected a titular member in the section of medicine and surgery in the room of M. Marey, deceased. The section proposed M. Dastre.

The number voting was 58 and at the first ballot M. Dastre received 54 votes. Born in 1844, a doctor of medicine of the Faculty of Paris, he has for almost 20 years held with high reputation the chair of physiology at the Sorbonne.

The Fight against Tuberculosis.

The Academy of Medicine has received an invitation from the Minister of the Interior to appoint a committee of inquiry into the question of erecting a sanatorium in the suburbs of Paris in accordance with a proposal put forward by the Director of the Assistance Publique. The Academy has accordingly appointed six of its members for this purpose and among them are M. Brouardel and M. Landouzy who are both in favour of the sanatorium method. Even among medical men who are best qualified to judge the sanatorium method has its adversaries. At the Congress held at Brussels last year there was a sharp contention between the partisans of the German system and another and important group of medical men. I need not repeat all the arguments but I may recall the fact that in Germany, despite all the moneys dispensed, tuberculous patients rarely stay in a sanatorium for a longer period than three months, and some years after their return home their mortality is exactly the same as that of tuberculous patients who have been treated for the same length of time in the hospital at Hamburg by ordinary methods. There is thus every reason for consideration before involving France in enormous expenses which give but little result. Nevertheless the Director of the Assistance Publique is very keen on the erection of another sanatorium. There is already one at Angicourt which has cost 2,500,000 francs. It is about 80 kilometres from Paris and contains only a small number of beds costing 8 francs net per diem. Even these have never been filled, for the committee of admission in its anxiety to get good results refuses any tuberculous patient whose disease is in an active state or has passed out of quite an early stage, any workman who has not a home to go to on his leaving the sanatorium, and any patient who having a family is likely to have to work hard after his period of treatment has expired. It is therefore apparent that the solution of a grave problem must be sought by other methods than have hitherto been employed, that is chiefly in hygienic methods. For this purpose all those who may be reasonably suspected of a predisposition to tuberculosis should be medically examined and if necessary treated in quite the early stages when therapeutics and hygienic methods are very likely to effect a cure. The report of the committee, consisting as it does of well-informed and conscientious members, can be hopefully awaited. Another question which is also much to the fore at present is that of the isolation of tuberculous patients in hospitals. In the opinion of the Director of the Assistance Publique special hospitals are desirable. A committee of the Hospitals Medical Society has decided that this ideal is unrealisable. To attain it either the present hospital system would have to be upset or else expenses for building would have to be incurred which neither the treasury of the Assistance nor of the city of Paris would be able to meet. Besides, it is unlikely that patients would agree to what would be practically imprisonment under the guise of going into a hospital. Various other suggestions have been made, among which is one that in every hospital certain wards should be allotted to tuberculous cases. But against this is the fact that tuberculous cases number quite a half of all hospital cases, so that half the medical wards would be occupied entirely with such cases and half the medical staff would be thereby compelled to devote their whole time to tuberculosis. This difficulty might be overcome by changing the staff of the tuberculous wards annually. In any case it would be a means of escape from a situation which has become intolerable.

Surgical Treatment of Tumours of the Large Intestine (the Rectum excepted).

At a recent meeting of the Surgical Society M. Hartmann reported that during the last three years he had removed ten tumours of the large intestine, six of them being cancerous and four being tuberculous. To these ten cases there might be added four from the wards of M. Terrier which he had operated on at an earlier date, two of these operations being for tuberculous disease and two for simple stricture. Among these 14 patients M. Hartmann reckoned 11 recoveries while there were three deaths—namely, two from post-operative peritonitis and one from intestinal obstruction. In deciding on the operation to be performed it was necessary to distinguish the cases which did and those which did not present symptoms of obstruction. For the former it was preferable to perform the operation in two stages. After the cancerous portion was drawn through the wound the intestine was sutured to the skin above and below the tumour, and the abdominal cavity being closed in this manner the tumour was removed by dividing the lower intestinal segment on a level with the skin and the upper segment at some distance from this point. To the protruding end of the intestine a cannula was then fixed, communicating with an indiarubber tube by which the fæces were conveyed to a suitable receptacle. In this way the wound was kept clean. If there were no symptoms of obstruction this was the best method of dealing with tumours of the colon. For tumours of the cæcum a single operation complete in itself was performed. In both cases the artificial anus was subsequently closed by resecting it and making a latero-lateral anastomosis of the bowel.

Successful Formation of an Artificial Joint in an Ankylosed Elbow.

At a recent meeting of the Société de l'Internat des Hôpitaux de Paris M. Monnier showed a girl, between 16 and 17 years of age, on whom he had in 1890 performed arthrectomy of the left elbow for bacterial osteo-arthritis. In the result there was complete ankylosis, the arm being bent at a right angle, as was plainly evident in a photograph shown by M. Monnier. In last March he performed typical subperiosteal resection of the elbow, making a posterior median incision and removing from 8 to 10 millimetres from the humerus and a like amount from the bones of the forearm. The subsequent progress of the case was uneventful and movement of the joint was commenced on the fourteenth day. On the forty-fifth day the girl was able to comb her hair and during the last two months she has fully resumed her occupation as a needlewoman. All the active movements of flexion, extension, pronation, and supination were normal. There were no lateral displacements except such as might be produced by grasping the articular ends of the bones with the hands and these were limited to a range of three or four millimetres. The girl could carry a weight of 1200 grammes with the arm. M. Monnier did not think that it was advisable to perform Defontaine's "trocheiform" operation in which the osseous surfaces were matched to one another by corresponding recesses in each of them, because stiffness might ensue and the operation has not been altogether successful in its author's experience. Neither did M. Monnier perform Quénu's operation, which consisted in interposing a fibro-muscular layer between the ends of the bones so as to maintain their mobility, because after the resection of joints which have suffered from bacterial disease there was little tendency to ankylosis.

Gustatory Sensitiveness in the Two Sexes.

At a recent meeting of the Academy of Sciences M. Vaschide read a note on the Relative Sensitiveness of the Gustatory Faculty in Man and Woman. He had found that man is more sensitive than woman as regards a salt taste and also, though in a less degree, for a bitter taste. As regards the acid and sweet tastes the two sexes are nearly equal. On the other hand, woman, whose olfactory sense is better developed than that of a man, is better able to distinguish flavours (*saveurs-odeurs*).

Dec. 13th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Restrictions on the Marriage of Defectives.

THE State of New Jersey has passed an Act to restrain epileptic, insane, and feeble-minded persons from marrying. It makes it unlawful for any person who has been confined in any public asylum or institution as an epileptic or insane or feeble-minded patient to marry in that State without a certificate from two regularly licensed physicians of the State that such person has been completely cured of such insanity, epilepsy, or feeble mind, and that there is no probability that such person will transmit any such defects or disabilities to the issue of such marriage. The law further provides that any person of sound mind who shall marry such epileptic, insane, or feeble-minded person, with knowledge of his or her disability, or who shall advise or

aid or assist in procuring such marriage, shall be guilty of a misdemeanour.

Opposition to Indiscriminate Medical Relief.

The Board of Regents of the University of Michigan passed a resolution to the effect that the medical faculty of the University must grant gratuitous medical and surgical treatment to everybody applying therefor, whether rich or poor. This action is condemned by the profession of the State and one county medical society enters the following protest. "Such a condition is contrary to all customs and rules governing the relation of one citizen to another; it deprives the medical citizens within the radius of the influence of the University of Michigan of part of their rights in an unwarranted manner and is harmful to the State as well as to the medical profession." A delegation was appointed to confer with the regents with a view to induce them to rescind their action.

A National First-Aid Society.

It has been proposed by a society in Chicago to establish a national first-aid society under the title of the "American White Cross First-Aid Society." The objects of the society are to educate the public in the principles and methods of first-aid emergency treatment of those injured by accident or suddenly stricken by illness, to install ambulances, stretchers, and first-aid material at places which may be considered necessary, to organise volunteer ambulance brigades for service in peace and in war, and to contribute personal and material aid for the mitigation of national disaster. A committee has been appointed to take immediate steps to arrange for the incorporation of the society. The value of such a society which will constantly diffuse the knowledge required to care for those stricken down by accident or suddenly taken ill cannot be over-estimated in these days of rapid transit by innumerable vehicles.

New Procedure in the Trial of Cases of Rape.

The legislature of Virginia has passed an important measure modifying the procedure of courts in the trial of cases of rape. It provides that before or during the trial of an indictment for rape, or attempted rape, in which the female who is alleged to have been assaulted is a witness, the judge of the court in which the same is tried may, in his discretion, direct that the deposition of such witness shall be taken at a time and place designated in the order. Such deposition shall be taken by the said judge, by the clerk, or by any officer authorised to take depositions in the presence of the said judge, who shall rule on all questions of evidence and otherwise, the taking of the same being conducted in the same way as though it were being taken in open court. There shall be present also the attorney for the Commonwealth, as well as the accused and his attorneys, who shall have the same rights in regard to the examinations of such witness as if she were testifying in open court and no other person shall be present unless expressly permitted by the judge. Such deposition shall be read to the jury at the time such witness might have testified if such deposition had not been taken and shall be considered by them and shall have the same force and effect as though such testimony had been given orally in court. But the clerk of the court, in case no appeal is taken, shall after the time for granting a writ of error has elapsed withdraw the deposition from the record and destroy the same.

Fourth Pan-American Medical Congress.

The Congress will meet at Panama on Jan. 2nd, 1905, and continue for four days. A large number of delegates are preparing to attend from this country. The Panama Government has appropriated $25,000 for the scientific session and entertainments. The Congress is divided into sections embracing the usual practical branches of medicine, surgery, and hygiene. The afternoons will be devoted to scientific work and the mornings and evenings to excursions and social functions. The value of these sessions of the Congress has proved very great to the nationalities engaged in them. They have brought about a mutual understanding in regard to methods of prevention of the great scourge of these tropical regions and the resulting coöperation of all the health authorities of the different countries along the same lines has practically suppressed if it has not exterminated this plague.

Prohibition of Athletic Contests of Endurance.

The Board of Aldermen has passed an ordinance prohibiting contests of endurance within the limits of the Greater City of New York. This action is taken to prevent the six days contests in bicycle and running races which have latterly been so frequent and so distressing. The new ordinance limits such contests to a period not exceeding three hours. This ordinance will receive the cordial support of the public, for these contests have been the source of popular disfavour for years.

American Surgeons at the Seat of War.

The General Staff has decided to send American surgeons as attachés to the Russian and Japanese armies provided the consent of the two Governments can be secured. It appears from the reports of American surgeons who have visited and observed the operations of the medical department of the Japanese army that we have much to learn as to the proper organisation and management of the details of that branch of service in the field. The success of the Japanese in the treatment of wounds and in preventing sickness among the troops far exceeds anything heretofore known. It is evident, therefore, that our army surgeons can learn many useful lessons if permitted personally to observe the details of management of the medical service of that army.

Sanitary Regulations of Barbers and Barbers' Shops.

The effort of the Department of Health of New York to improve the sanitary condition of the barbers' shops is progressing favourably and will evidently result in a great reform in the management of these unpleasant and often disease-breeding resorts. The following are the provisions of the Sanitary Code. Every barber's shop in the city of New York shall be conducted in accordance with regulations adopted from time to time by the Board of Health. The following are the regulations adopted by the board: 1. Barbers must wash the hands thoroughly with soap and hot water before attending any person. 2. No alum or other astringent shall be used in stick form. If used at all to stop the flow of blood it must be applied in the form of powder. 3. The use of a powder-puff is prohibited. 4. No towel shall be used for more than one person without being washed. 5. The use of sponges is prohibited. 6. Mugs and shaving brushes shall be thoroughly washed after use on each person. 7. Combs, razors, clippers, and scissors shall be thoroughly cleansed by dipping in boiling water or other germicide after every separate use thereof. 8. No barber, unless he is a licensed physician, shall prescribe for any skin disease. 9. Floors must be swept or mopped every day and all furniture and woodwork kept free from dust. 10. Hot and cold water must be provided. 11. A copy of these regulations is to be hung in a conspicuous place in the shop. Customers are recommended to have their own brushes, combs, razors, and cups in order to avoid as far as possible the contracting of contagious skin diseases and are requested to report any failure of barbers to comply with the above rules.

Poisoning by Wood Alcohol.

Twenty deaths by drinking whisky, adulterated with wood alcohol, in this city emphasise the action of the American Medical Association at its last session, which was to the following effect: It was resolved that the House of Delegates, recognising the dangerous character of wood alcohol and liquors containing it, believes that it should be placed on the list of poisons. The preamble alleges that wood spirit or methyl alcohol is known to have been responsible for numerous deaths and many cases of blindness in this country during the past few years; even the breathing of confined air charged with the fumes of this form of alcohol has been shown to produce blindness. It is asserted that "Columbian spirits" and other "deodorised" forms of this deadly poison are being substituted for the innocuous, or less injurious, grain alcohol in all sorts of liquids which are used. The 20 deaths in this city occurred among labouring men who obtained their whisky from a single saloon. The excitement was so great that a mob wrecked the saloon. The farther recommendation of the association is that the Federal and State authorities should take the necessary measures to protect life and eyesight from the pernicious influence of this poison.

Report of the Scientific Exhibit of the American Medical Association.

This is a report of the fourth scientific exhibit of the association which is remarkable for the great variety and the excellence of the specimens exhibited. The practical benefits of the exhibit have been abundantly demonstrated. The large attendance at these exhibitions and the close attention given to the explanations afford ample proof of their success.

The exhibit is educational and is adapted to instruct the practitioner who has few opportunities for research in the latest scientific and practical facts in medicine. An immediate effect of the exhibit has been to stimulate medical colleges to make collections of macroscopic specimens and to prepare them in an artistic manner. Another influence of the exhibit is seen in the greater attention paid to macroscopic specimens which may be studied with the eye, as compared with microscopic pathology which is reserved for the few. It is impossible to enumerate the specimens in such a manner as to give an adequate conception of their variety. Some idea may be gained of the exhibit when it is stated that the Boston University School had 100 specimens, the Cincinatti Hospital Museum 33, the Harvard Medical School 181, Jefferson Medical College 155, and the Philadelphia General Hospital 393. During the session competent teachers explained these specimens continually to the members of the association.

Cholera in the Philippine Islands.

Assistant Surgeon Perry of the Public Health Service has made an interesting report on cholera in the Philippines. He estimates that in the epidemic of 1902 173,619 cases occurred in the provinces with 109,703 deaths. In his opinion the spread of the disease was not due to the water-supply but to the infection of food by the contamination of flies. This was certainly the case in the Bilibid Prison, Manilla. It appears that in Manilla the Chinese suffered less than the other inhabitants. This he attributes to the fact that they drink tea as a beverage and use chopsticks in eating while the Filipinos use their fingers; the Chinese also generally eat cooked food. The cholera was especially severe among Americans, which the writer attributes to their neglect of the usual precautions.

American Nurses in Japan.

With the outbreak of the war between Russia and Japan there was a rush of nurses from this country to Japan. It now appears that they were not only not needed but they have proved a burden which has greatly disturbed the Japanese authorities. An American writer of known trustworthiness states that of all the difficulties the Japanese Government has been compelled to contend with since the beginning of the war the most perplexing were the newspaper men and the American nurses. Neither were wanted and both have been inexpressible nuisances. The medical officers of the army regard the nurses as an incubus; as they cannot speak or understand any language but English neither the surgeons nor the soldiers can converse with them. But above all, the Japanese have an army medical department more complete and efficient than any other nation and have no need of any outside aid. The writer adds that the nurses have been splendidly treated and have been almost killed by politeness as well as buried under gifts. They have been sent to the other end of Japan where they are supposed to be nursing sick soldiers and prisoners of war. It is stated that for the accommodation of these nurses the medical department remodelled one of the houses at the Hiroshima Hospital in modern style and furnished European cooks to make their unwelcome guests comfortable.

Dec. 3rd.

Obituary.

WILLIAM GEORGE VAWDREY LUSH, M.D. LOND., F.R.C.P. LOND., F.R.C.S. ENG.

THE announcement that Dr. William George Vawdrey Lush of Weymouth, an old and valued member of the profession, died in unusual circumstances on Dec. 7th has been received with deep regret by a wide circle of friends. Dr. Lush, who was honorary physician to the Dorset County Hospital, while attending a committee meeting at the hospital on the day in question was seized with sudden illness, fell from his chair to the floor, and expired in a few minutes. Mr. W. B. Cosens, one of the honorary surgeons to the institution, who was present, rendered every assistance in his power, which, however, proved unavailing. The cause of death was certified to be cerebral hæmorrhage. Dr. Lush received his medical education at St. Bartholomew's Hospital. In 1865 he obtained the M.B. degree of the University of London (with treble first-class honours), and in the following year the M.D. degree, while he also became F.R.C.S. Eng. by examination. In 1879 he was admitted as M.R.C.P. Lond. and in 1889 had the honour of the Fellowship of the College conferred upon him. He was the only Fellow of the College in Dorset. He also received the compliment of being elected Fellow of the Royal Academy of Medicine in Ireland.

Dr. Lush, who was born on May 24th, 1834, had a distinguished professional career. He commenced practice in Weymouth, but a few years afterwards the honorary physicianship to the County Hospital becoming vacant he was unanimously appointed to the post. He discharged the duties of the office for the lengthened period of 32 years with the highest efficiency and success. Though conducting an extensive practice in Weymouth and the surrounding district he attended with unremitting regularity and devotion at the County Hospital, Dorchester, where the claims upon his time were often of an onerous character. But the institution was dear to him and his work was truly a "labour of love." Its motto "*Christo in pauperibus*" was the ruling principle of his life. Besides being physician to the County Hospital Dr. Lush was consulting physician to the Weymouth Royal Hospital and also to the Royal Portland Dispensary and the Dorset Friendly Society. Sincerely devoted to the profession, he was a man of simple, unaffected piety and his Christianity was shown by his good deeds, in the large pecuniary help which he frequently gave to the restoration of churches, and other philanthropic work. Dr. Lush, though he was not a voluminous writer, contributed occasionally from 1871 onwards valuable papers to THE LANCET, the *British Medical Journal*, and the *Medical Times and Gazette*. Shortly after settling in Weymouth he exerted himself successfully in forming the Dorset and West Hants branch of the British Medical Association, of which he became honorary secretary and for many years its representative at the central council. After discharging the duties of secretary for 30 years the members of the branch recognised his valuable labours by presenting him with a testimonial. The gift consisted of a service of silver plate, including a tea and coffee service with other articles, and also a massive clock with cathedral chimes. The presentation took place at the annual meeting held at Weymouth and the speeches then made testified to the personal attachment to Dr. Lush of his professional brethren and their cordial appreciation of the zeal, energy, and earnestness which he had displayed in connexion with the branch.

The deceased as a consultant enjoyed the confidence of his professional brethren who highly esteemed not only his skill but his integrity of character. Dr. Lush was an active member of the Salisbury Diocesan Synod and at his death was honorary secretary of the Dorset branch of the Queen Victoria Clergy Fund. He leaves a widow to mourn her loss and the feeling is shared by everyone who knew him in all classes of the community.

"The actions of the just
Smell sweet and blossom in the dust."

The funeral, which took place on Dec. 13th, was the largest known in Weymouth during the last 40 years. The procession consisted of about 50 carriages while the floral wreaths and crosses were so numerous that they were conveyed in a special vehicle. The Church was represented by two archdeacons, several canons, and many clergy; the corporation of Weymouth by the mayor, aldermen, and officials; while the medical profession, of which the deceased was so bright an ornament, had many representatives not only from Weymouth, Dorchester, and Bournemouth but from nearly every part of Dorsetshire, Wilts, Hants, and Somerset.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced.—Dr. Karl Köster, professor of pathological anatomy and general pathology in the University of Bonn. He was formerly assistant to von Recklinghausen in Würzburg and subsequently professor in Giessen whence he migrated to Bonn in 1874. He published a large number of valuable monographs on carcinoma, tuberculosis, heart diseases, diseases of vessels, and so on.—Dr. Karl Klein, extraordinary professor of surgery in Moscow.—Dr. Friedrich Plehn who was for many years colonial medical officer in the Cameroons.—Dr. Otto Bode, surgeon to the Victoria Hospital at Weissensee, Berlin, from septicæmia contracted in the course of his surgical work. Some three years ago his right hand was seriously affected after a poisoned wound, since which time he had been able to use his left hand with

the dexterity for which he was always remarkable.—Dr. Carl Stellwag von Carion, formerly professor of ophthalmology in Vienna and author of many important works and monographs. He was 81 years of age.—Dr. T. F. Prewitt, professor of external pathology in the Washington University, St. Louis.—Dr. Oswald Naumann, *privat-docent* of internal medicine in the University of Leipsic, aged 71 years.—Dr. Petel, surgeon to the Rouen hospitals.

Medical News.

UNIVERSITY OF OXFORD.—At examinations held recently for the M.B. degree the following passed in materia medica and pharmacy:—

Frederick James Aldridge, Magdalen College; Norman Edward Grosvenor, Brasenose College; Otto Gustav Ferdinand Luhn, B.A., Christ Church; Cuthbert Taunton Raikes, B.A., Trinity College; and Thomas Ramsbotham Walker, B.A., Hertford College.

UNIVERSITY OF CAMBRIDGE.—At a Congregation on Dec. 8th the following degrees were conferred:—

Bachelor of Medicine and Bachelor of Surgery.—E. J. D. Taylor, Caius.

Mr. W. H. R. Rivers, M.D. Lond., St. John's, has been appointed a member of the Special Board for Moral Science.—New schedules in Chemistry and other branches of Physics for the First M.B. Examination have been issued by the Special Board for Medicine. Copies may be obtained from the Registrary.—Dr. W. E. Dixon and Mr. T. S. P. Strangeways have been appointed additional examiners for Part I. of the Third M.B. Examination, and Dr. G. R. Murray, Dr. D. MacAlister, and Mr. T. H. Kellock examiners for Part II. of the same examination in the current term.

TRINITY COLLEGE, DUBLIN.—At the final examination in midwifery held in Michaelmas term the following candidates were successful:—

Benjamin Johnson, Arthur A. M'Neight, John Cunningham, Lily A. Baker, William J. Powell, William R. Galwey, William Nunan, Thomas J. T. Wilmot, Eva J. Jellett, James H. C. Thompson, Henry E. M'Cready, Thomas Creaser, George McG. Millar, William Hassard, Carlile Kelly, and Alfred G. Alexander.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Fuchs, *privat-docent* of Mental Diseases, has been promoted to an Extraordinary Professorship. Dr. Gustav Wolff has been promoted to the chair of Mental Diseases.—*Berlin:* Dr. W. Stöckel of Erlangen has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Bordeaux:* Dr. J. R. Dupouy, *agrégé*, has been appointed Professor of Pharmacy.—*Breslau:* Dr. J. Biberfeld has been recognised as *privat-docent* of Pharmacology and Toxicology.—*Clausenberg:* Dr. Desider Veszprémi has been recognised as *privat-docent* of Pathological Histology and Dr. Emerich Hevesi as *privat-docent* of Orthopædic Surgery.—*Copenhagen:* Dr. O. Jersild has been recognised as *privat-docent* of Dermatology. Dr. Hasselbach has been appointed to the charge of the Laboratory of the Finsen Institute.—*Cracow:* Dr. Stanislaus Drobq has been recognised as *privat-docent* of Bacteriology.—*Erlangen:* Dr. Karl Menge of Leipsic has been appointed Professor of Midwifery and Gynæcology.—*Florence:* Dr. Giuliano Daddi has been recognised as *privat-docent* of Internal Pathology.—*Freiburg:* Dr. Pankow has been recognised as *privat-docent* of Gynæcology and Dr. Gierke as *privat-docent* of Pathological Anatomy.—*Ghent:* Dr. Eugène Eeman, Professor of Internal Pathology, has been appointed Professor of Clinical Medicine in succession to Dr. R. Boddaert, resigned; Dr. De Stella has been appointed to the chair thus vacated.—*Giessen:* Dr. F. Moritz of Greifswald has been appointed to the chair of Clinical Medicine in succession to the late Dr. Riegel.—*Halle:* Dr. Hermann Hildebrandt has been recognised as *privat-docent* of Forensic Medicine and of Pharmacology.—*Leyden:* Dr. M. Jansen has been recognised as *privat-docent* of Orthopædics. Dr. N. P. Tendeloo has been appointed to the chair of Pathological Anatomy.—*Marburg:* Dr. H. Küttner of Tübingen has been appointed Extraordinary Professor of Surgery.—*Upsala:* Dr. K. P. Dahlgren has been appointed Extraordinary Professor of Surgery.—*Vienna:* Dr. Friedrich Kovacs, Dr. Friedrich Obermayer, and Dr. Alois Pick, *privat-docenten* of Internal Medicine, have been promoted to Extraordinary Professorships. Dr. Hugo Wintersteiner has been recognised as *privat-docent* of Ophthalmology, Dr. Josef Pollak as *privat-docent* of Otology, Dr. Heinrich Paschka as *privat-docent* of Pharmacology, and Dr. Robert von Töply as *privat-docent* of the History of Medicine.

A HARDY SLEEPER.—On Nov. 22nd there was a snowstorm over a wide area in the north and about midnight a policeman found a man belonging to Accrington asleep in a field. At the police-court it was stated that he was an extraordinary character. He could sleep standing or walking but preferred to sleep in an open field, caring nothing for rain or snow. The last time he was before the court he fell asleep in the dock. He pleaded not to be sent to gaol, saying it was "so draughty in prison," where, however, he was sent for a month. Some people seem to have more power to resist cold than others or to be more indifferent to it, but if this exposure were compulsory instead of being voluntary there would perhaps be another story.

DONATIONS AND BEQUESTS.—By the will of Mr. James Thomas Smith of Lee the Miller Hospital, the British Home for Incurables, and the Dreadnought Hospital each receive £1000; the London Hospital receives £500; the National Hospital for the Paralysed and Epileptic, £100; the Provident Surgical Appliance Society for the Relief of the Crippled Poor, £100; Eltham Cottage Hospital, £100; the National Truss Society, £100; and the Female Lock Hospital, £100.—The executors of the late Mr. A. O. Crooke have given £2000 guineas to the Royal Waterloo Hospital for the endowment of cots.—The Corporation of the City of London has given £78 15*s.* to the Friedenheim Hospital.—The sum of £1006 was realised by the bazaar held recently in aid of the Earl of Beaconsfield Memorial Cottage Hospital.

LITERARY INTELLIGENCE.—Amongst new books to be issued by Messrs. J. and A. Churchill in the New Year is a German-English dictionary of terms used in medicine and the allied sciences by the late Mr. Hugo Lang, edited and completed by Dr. Bertram L. Abrahams. This dictionary is intended to be a complete glossary of German medical words in common use; it contains also a large number of terms employed in the ancillary sciences, particularly chemistry, biology, and pathology. "Abdominal Pain, its Causes and Clinical Significance," is the title of a new contribution to the literature of the subject from the pen of Mr. A. E. Maylard of Glasgow.—A new work on Materia Medica is announced by Mr. Henry Kimpton. The book is by Mr. John Humphrey, joint author of "Pharmacopedia," and deals with all the crude drugs of vegetable and animal origin in common use, including those official in the British Pharmacopœia and the Indian and Colonial Addendum, as well as the more important unofficial drugs. The monographs contain full descriptions of all the drugs, with concise notes embodying the most recent information about their origin, properties, uses, and chemical constituents. An introduction to the work has been written by Mr. E. M. Holmes, F.L.S., and a special feature of the book is an exhaustive index which should be found useful for purposes of reference. Though containing as full information as many larger works the volume is a compact one of about 500 crown octavo pages and will be published at the price of 5*s.* net.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.—The annual dinner of the members of the Polyclinic and their friends was held on Dec. 7th at the Trocadéro Restaurant, London, W., Dr. C. T. Williams being in the chair. Covers were laid for about 200 guests, including many ladies. Amongst those present were: Miss E. Garrett Anderson, Mr. H. L. Barnard, Mr. and Mrs. J. Berry, Dr. Harry Campbell, Mr. J. Cantlie, Mr. E. Clarke, Mr. J. Jackson Clarke, Dr. W. Ewart, Dr. S. G. Felce, Dr. and Mrs. J. Dundas Grant, Mr. Reginald Harrison, Dr. C. O. Hawthorne, Mr. C. R. B. Keetley, Mr. and Mrs. W. Arbuthnot Lane, Dr. E. G. G. Little, Dr. F. Harrison Low, Dr. A. P. Luff, Dr. J. M. H. MacLeod, Dr. F. J. McCann, Captain A. E. H. Pinch and Mrs. Pinch, Mr. A. W. Mayo Robson, Mrs. M. Scharlieb, M.D., Dr. J. E. Squire, Dr. H. Campbell Thomson, Dr. H. Tilley, Mr. and Mrs. A. H. Tubby, Dr. and Mrs. Leonard Ll. B. Williams, and Mr. Harold Begbie. After the usual loyal toasts had been duly honoured the chairman proposed the toast of "The Polyclinic." He commented with pride on the success that the Polyclinic had attained and mentioned that the number of practitioners now enrolled on the books of the institution nearly reached 1000. It would be a matter of surprise to some to hear that the attendance at the daily four o'clock demonstration

was over 40 and at the daily five o'clock clinical lecture it was not far short of that. The Polyclinic had achieved such a success that teachers from every London hospital and from most of the provincial medical centres had been proud to lecture at the institution. Though the annual subscription was only one guinea the financial position was so far satisfactory that the College was able to continue its work on the pecuniary support and assistance it was now receiving. In the course of the last 12 months the Polyclinic had been opened to qualified medical women. In replying to this toast Captain Pinch, the medical superintendent, amused his audience with a humorous speech. Mr. Mayo Robson, in proposing "The Guests," dwelt upon the need there was for such an institution as the Polyclinic and the useful work which it was doing. After Mr. W. Armstrong had responded Dr. Tilley proposed the toast of "The Ladies," to which Mrs. Scharlieb replied. Mr. Cantlie was intrusted with the task of proposing the health of the chairman, who briefly replied. A large share of the entertainment of the evening devolved upon the following accomplished artistes: Miss M. Watts, Mr. N. Jackson, Mr. W. Kirby the Australian tenor, and "Alberto" the Australian magician.

BOOKS, ETC., RECEIVED.

ADDISON PUBLISHING CO., Buchanan-buildings, 24, Holborn, E.C.

The Addison Temperance Reader. With Chapters on Thrift and on Juvenile Smoking. By William Finnemore, sometime Day School Lecturer for the United Kingdom Band of Hope Union. Price 1s. 6d.

APPLETON, D., AND CO., 436, Fifth-avenue, New York.

Surgical Emergencies. The Surgery of the Abdomen. Part I., Appendicitis and Other Diseases about the Appendix. By Bayard Holmes, B.S., M.D., Professor of Surgery in the University of Illinois. Price $2.00 net.

APPLETON, SIDNEY, 25, Bedford-street, Covent-garden, W.C.

Multiple Personality: An Experimental Investigation into the Nature of Human Individuality. By Boris Sidis, M.A., Ph.D. Harvard, Author of the Psychology of Suggestion and Psychopathological Researches, and Simon P. Goodhart, Ph.B. Yale, M.D. Price 10s. 6d. net.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.

A Handbook of Pathological Anatomy and Histology. With an Introductory Section on Post-mortem Examinations and the Methods of Preserving and Examining Diseased Tissues. By Francis Delafield, M.D., LL.D., Emeritus Professor of the Practice of Medicine, College of Physicians and Surgeons, Colombia University, New York, and T. Mitchell Prudden, M.D., LL.D., Professor of Pathology and Director of the Department of Pathology, College of Physicians and Surgeons, Colombia University, New York. Price 25s. net.

Some Methods of Hypodermic Medication in the Treatment of Inoperable Cancer. By John A. Shaw-Mackenzie, M.D. Lond. Price 1s. net.

The Treatment of Syphilis. By F. J. Lambkin, Lieut.-Col., R.A.M.C., Specialist at the Army Headquarters, India. Price 3s. net.

BELL, GEORGE, AND SONS, London,

The Food of the Future. A Summary of Arguments in Favour of a Non-flesh Diet. By Charles W. Forward. With a Preface by Ernest Bell. Price not stated.

BEMROSE AND SONS, LIMITED, 4, Snow-hill, E.C.

Monthly Diary, 1905. Calendars for 1905: "Proverbial"; "Daily"; "Shakespearean"; "Comedy." Price 1s. each.

CHURCHILL, J. AND A., 7, Great Marlborough-street, W.

Reports of the Society for the Study of Disease in Children. Volume IV. Section of 1903–1904. Editor: George Carpenter, M.D. Price 12s. 6d.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XXIV. Session 1903–1904. With List of Officers, Members, &c. Price 12s. 6d. net.

COLLINGRIDGE, W. H. AND L., 148 and 149, Aldersgate-street, E.C.

The City Diary and Almanack for 1905. Forty-second year of publication. Price 1s.

DEUTICKE, FRANZ, Leipzig und Wien.

Die Krankheiten der Oberen Luftwege. Dritter Teil. Die Krankheiten des Kehlkopfes und der Luftröhre. Von Prof. Dr. Ottokar Chiari, Vorstand der Klinik für Kehlkopf- und Nasen-krankheiten an der K.K. Universität in Wien. Price M.10.

FOULIS, T. N., Edinburgh and London.

Love's Tribute. A Sonnet-sequence. By James Whitehead. Price not stated.

HEADLEY BROTHERS, 14, Bishopsgate Without, E.C.

The Transactions of the Hunterian Society. 190–1904. Eighty-fifth Session. Price not stated.

HEFFER, W., AND SONS, Cambridge. (SIMPKIN, MARSHALL AND CO., London.)

Exercises in Practical Physiological Chemistry. By Sydney W. Cole, M.A., Trinity College, Cambridge, Additional Demonstrator in Physiology, Cambridge University. Price 5s. net.

Practical Exercises in Chemical Physiology and Histology. Arranged by H. B. Lacey, Head of the Biological Department of the South-Western Polytechnic, Chelsea, and C. A. Pannett, B.Sc. Lond., First Class Honours in Physiology, with Scholarship, at Inter. M.B. Lond., Lecturer in Physiology at the South-Western Polytechnic, Chelsea. Price 2s. net.

HILTON, C. AND CO., 109, College-street, Calcutta.

A Treatise on Materia Medica and Therapeutics, including Pharmacy, Dispensing, Pharmacology, and Administration of Drugs. By Rakhaldas Ghosh, L.M.S., Cal. Univ., Lecturer on Materia Medica, Calcutta Medical School. Edited by C. P. Lukis, M.B., F.R.C.S., Lieut.-Colonel, Indian Medical Service, Offg. Professor of Therapeutics, Calcutta Medical College. 1904. Price Rs. 4/8 or 7s.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Untersuchungen über Knochenarterien mittelst Röntgenaufnahmen injizierter Knochen und ihre Bedeutung für einzelne pathologische Vorgänge am Knochensysteme. Von Dr. E. Lexer, a.o. Professor, Dr. Kuliga und Dr. Wolfg. Türk, früheren Volontärassistenten der königl. chirurg. Universitätsklinik Sr. Exzellenz von Bergmann, Berlin. Mit 22 stereoskopischen Bildern und 3 Tafeln. Price M.18.

Zeitschrift für Experimentelle Pathologie und Therapie. Herausgegeben von L. Brieger (Berlin), H. E. Hering (Prag), F. Kraus (Berlin), und R. Paltauf (Wien). Erster Band. Erstes Heft. Price M.7.

Beiträge zur Klinischen Medizin. Festschrift Herrn Geheimrat, Professor Senator, zur Feier seines siebenzigsten Geburtstages gewidmet. Price M.12.

HUSSEY AND GILLINGHAM, 26 and 28, Waymouth-street, Adelaide, South Australia.

A Manual for Coroners. Being a Guide to Coronial Inquiries and Inquests in South Australia and throughout Australasia and in England. By W. Ramsay Smith, M.B., B.Sc. Edin., City Coroner for Adelaide. (Published under the Auspices of the Justices' Association, and with the Approval of the Government, of South Australia.) Price 10s. 6d. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BLACKBURNE, G. H. S., M.B., B.S. Melb., D.P.H. Camb., has been appointed Pathologist and Bacteriologist on the Honorary Medical Staff of the Perth Public Hospital, West Australia.

BLAXLAND, WALTER, F.R.C.S. Eng., has been appointed Ophthalmic Surgeon on the Honorary Medical Staff of the Perth Public Hospital, West Australia.

BRAUND, ARTHUR MATHER, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the North District and Workhouse of the Stratton (Cornwall) Union.

BYRNE, J. P., L.R.C.S., L.R.C.P.I., has been appointed Senior Resident Surgeon to the Provincial Hospital, Port Elizabeth, Cape Colony.

CANN, FRANCIS JOHN HUGHTREDE, M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer to the Dawlish (Devon) Lodge of Oddfellows.

GAGE, D. P., L.R.C.P. Edin., L.F.P.S. Glasg., D.P.H., has been appointed Certifying Surgeon under the Factory Act for the Kilwinning (Burgh) District of the county of Ayr.

GEE, C. A., M.R.C.S., L.R.C.P., has been appointed Medical Officer for the No. 7 District by the Shepton Mallet (Somerset) Board of Guardians.

HARVEY, WILLIAM, L.R.C.P. & S. Edin., has been appointed Acting Health Officer and Acting Medical Officer at Cairns, Queensland, Australia, Acting Visiting Surgeon of the Prison at Cairns, and an Acting Health Officer *pro tem.*

HOYES, W. T., M.D. Canada, has been appointed Clinical Assistant to the Chelsea Hospital for Women.

KIDD, ARCHIBALD, M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed Medical Officer of Health, Port Elizabeth, South Africa.

RYAN, J. B., L.R.C.P. & S. Irel., has been appointed Certifying Surgeon under the Factory Act for the Taghmon District of the county of Wexford.

SHEPPARD, J. F., L.R.C.P. & S. Irel., has been appointed Certifying Surgeon under the Factory Act for the Newport Pagnell District of the county of Buckingham.

WILLIAMS, G. J., M.B., has been appointed Certifying Surgeon under the Factory Act for the Haltwhistle District of the county of Northumberland.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board, washing, &c.

BOWDEN, CHESHIRE, MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer. Salary £100 per annum, with board, apartments, and washing.

CARLISLE, CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer. Salary £130 a year, rising to £150, with board, lodging, and washing.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Resident Medical Officer, unmarried. Salary £80 per annum.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £100, with board and residence.

EASTERN DISPENSARY, Leman-street, Whitechapel.—Resident Medical Officer.

EDINBURGH UNIVERSITY.—Examinerships in (1) Public Health Laboratory Work; (2) Botany; (3) Chemistry; (4) Anatomy, including Arthropology; (5) Pathology; (6) Practice of Medicine; (7) Midwifery; (8) Forensic Medicine; and (9) Public Health (Medical, Degrees Examination) and Sanitation, Sanitary Law, and Vital Statistics (Science Degree Examination).

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury-avenue, W.C.—Assistant Resident Medical Officer, unmarried. Honorarium £40 a year, with full board.

GUILDFORD, BOROUGH OF.—Medical Officer of Health. Salary £100 per annum, rising to £150.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians for six months. Honorarium of £25.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, residence, and washing.

KING EDWARD VII. SANATORIUM.—Medical Superintendent. Salary £500 per annum, rising to £600, with board, lodging, and attendance.

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL.—Two House Surgeons and a House Physician. Salary £60 each per annum, with residence and maintenance.

LONDON COUNTY ASYLUM, Claybury, Woodford-bridge, Essex.—Junior Assistant Medical Officer. Salary £150 per annum, with board, apartments, and washing.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, London, E.—Teachers of Protozoology and Teachers of Helminthology. Salary £250, rising to £500 per annum, with luncheon and tea.

NEW ZEALAND, UNIVERSITY OF OTAGO.—Professor of Physiology. Salary £800, with fees.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal-green, E.—Pathologist and Bacteriologist. Salary £50 per annum, with lunch.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Also Assistant House Surgeon. Salary £100, with board, lodging, and washing in each case.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Honorary Medical and Surgical Staff.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Assistant Surgeon to Out-patients.

ST. PETER'S HOSPITAL FOR STONE, ETC., Henrietta-street, Covent Garden, W.C.—Out-patient Clinical Assistants for six months.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board and residence.

STOKE-UPON-TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House Surgeon. Salary £110 per annum, with apartments, board, and washing.

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician. Salary £75, with board, apartments, washing, and attendance. Also Assistant House Surgeon. Salary £50 per annum, with board, apartments, washing, and attendance.

UNIVERSITY OF LONDON.—Examiners in Medicine, Surgery, Anatomy, Physiology, Obstetric Medicine, Forensic Medicine and Hygiene, and State Medicine.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for a Certifying Surgeon under the Factory Act at Ruddington, in the county of Nottingham; at Newbury, in the county of Berks; and at Westport, in the county of Mayo.

Births, Marriages, and Deaths.

BIRTHS.

ADDISON.—At Wican Croft, Northwood, Middlesex, on Dec. 8th, the wife of Christopher Addison, M.D., of a son.

REYNOLDS.—At Highcroft, Shepherd's-hill, Highgate, on the 9th inst., the wife of Austin Edward Reynolds, M.R.C.S. Eng., of a son.

MARRIAGES.

BENTLEY—CONSTABLE.—On Dec. 8th, at Rusthall parish church, Tunbridge Wells, Harold, second son of John Eugene Bentley of Sandford Dene, Cheltenham, to Hannorah Marie Louise, daughter of the late William Constable of Cahir, co. Tipperary.

SHARP—MURRAY.—At Christ Episcopal Church, Edinburgh, on Dec. 14th, by Rev. C. M. Block, M.A., Dr. Gordon Sharp of Leeds, to Ada, youngest daughter of the late Lieutenant Colonel Charles Stewart Murray, 72nd (Duke of Albany's Own) Highlanders.

DEATH.

LUSH.—On Dec. 7th, at Dorchester, William George Vawdrey Lush, M.D., F.R.C.P. Lond., F.R.C.S. Eng.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

UNIVERSITY DEGREES FOR LICENTIATES OF THE CONJOINT BOARD.

THE diplomas of the Royal College of Physicians of London and the Royal College of Surgeons of England are the most usual qualifications entitling the holders to practise medicine in England, for it is only a minority of the profession who commence their studies by matriculation at a university and afterwards in due course proceed to graduation. As certificates of medical training and guarantees of professional capacity the licences or diplomas of the Royal Colleges are in no respect inferior to the degrees conferred by the universities, but the fact nevertheless remains that for some reason or other, which is perhaps not altogther unconnected with sentiment, many holders of the College licences would in after life like to add M.D. to the letters which they are entitled to attach to their names. A university, however, does not limit itself to the examination of candidates for its degrees and usually imposes on its would-be graduates conditions which could not be fulfilled by men actually engaged in medical practice. Such conditions may be of various kinds, but in general the most onerous are compulsory residence and study for at least a year or two at the university in question, prolonged intervals between the successive examinations, and preliminary examinations in literary and scientific subjects unconnected with the ordinary medical curriculum. The University of Durham has here come to the rescue by instituting special examinations for an M.D. degree obtainable by registered practitioners not less than 40 years of age, the University of St. Andrews is available to a limited extent, and the University of Brussels offers still easier terms. A correspondent who is on the sunny side of 40 years, and is anxious to possess an M.D. degree not from a foreign source but from an English one, writes to us as follows:—

> Would it not be possible for the University of Durham to reduce their age limit from 40 to 35 and 14 years qualified? ..... My suggestion is that either Durham or some of the other universities should give an M.D. after examination to men over 35 and not less than ten years qualified. ..... I hope the subject will be taken up by others in your columns.

Arguments on the other side would no doubt be forthcoming if required. An obvious one would be that the line must be drawn somewhere and that those who to obtain the coveted distinction have "borne the burden and heat of the day" at the Universities of Oxford or Cambridge or London might be inclined to protest against any extensive relaxation of the existing system.

THE SALE OF PATENT MEDICINES AND DISPENSING BY PRACTITIONERS.

WE not infrequently receive letters complaining of the apathy of the General Medical Council in matters affecting the material interests of the profession, especially in connexion with the suppression of unqualified practice. The Council might conceivably in some instances use its influence more than it does but its sphere of action and its authority are limited, as we take an opportunity of pointing out each year in our Students' Number. A correspondent who writes to us from a Lincolnshire town has, however, apparently over-estimated its authority, for after very justly condemning the extensive use of patent medicines and the fraudulent statements contained in the advertisements of them, he goes on to propose the following remedy which can hardly have any immediate prospect of coming into operation:—

> Let the medical representatives in Parliament bring in a Bill at the instance of the Medical Council for the suppression of all patent medicines (not forgetting the infants' foods which every medical practitioner sees daily are ruining the youngest members of this generation), and to counteract the severe effect that this would have on the ordinary chemist let the Medical Council prohibit practitioners from dispensing except during certain hours of the night if urgency requires it.

RAILWAY ACCIDENTS AND "TEMPORARY MENTAL ABERRATION."

IN an editorial article the *Engineer* of Dec. 9th discusses the great frequency of railway accidents in the United States of America and enumerates various explanations of the fact. In the United States last year 3787 passengers and servants were killed and 51,343 were injured in train accidents. In the previous year 3564 were killed and 45,977 injured, while in 1902 the numbers were 2819 killed and 39,800 injured. There are in the United States about 250,000 miles of railway, or ten times as much as in Great Britain, but the density of the traffic, the number of trains run and of passengers carried, places this country more nearly on a level with the United States than appears at first sight to be possible. With us in 1902 out of 11,880,000 passengers only six were killed. The worst accidents on British railways are derailments. Collisions are due to fogs for the most part and, secondly, to mistakes made by drivers or signalmen. Individuals are run over and shunters are caught under trains or between buffers. In the United

States the worst accidents are due to the failure of bridges or trestles, collisions, and the running over of individuals at level crossings. Among the various elements of danger, one which is about as commonly met with in this country as on the other side of the Atlantic, is what has been not inaptly called "temporary mental aberration" and consists in a kind of absent-mindedness, leading railway men to disregard orders with which they are perfectly familiar. A curious feature of these lapses is that two men working in company, such as the driver and fireman of a train or two signalmen in the same box, will both make the same mistake at the same time. The *Engineer* remarks that the mechanical interlocking of points has for its object the prevention of some of the accidents due to this cause and would be wholly unnecessary if signalmen were perfect.

PHYSICAL CULTURE.

THERE is at present a craze for what is called physical culture. When properly carried out this is a means of "training" which is of great value and one of its most prominent exponents is Mr. Sandow, who is himself a magnificent example of bodily perfection. Mr. Sandow has for some years past devoted himself to physical training but has of late embarked upon the perilous path of physical training as applied to medicine, or, perhaps we should say, to the cure and the prevention of certain physical ailments. We say perilous, for Mr. Sanflow has not, we believe, received any medical training, though we learn from the latest advertisement concerning him that he has studied anatomy and physiology. The advertisement in question appears in a newly established journal called the *World and His Wife* and is written by a medical man, Mr. Robert Beswick, M.R.C.S. Eng. Mr. Beswick was qualified in 1882 and so is quite old enough to know that his conduct in recommending an unqualified practitioner in the public press is not commensurate with his duties to his profession. We do not mean to say that carefully graduated muscular exercises when given under the superintendence of a medical man are not of value in cases of constipation, or in preventing the return of a hernia, and Mr. Sandow stands upon a different footing from "The Grecian School of Physical Culture," which, we fancy, is one of Pointing's adventures, or the person who calls himself Jonathan Nicholson who also "runs" physical culture. If Mr. Beswick likes to take his patients to Mr. Sandow for a course of gymnastics he is quite at liberty to do so, provided that he superintends the exercises himself, but it is not fitting that he should advertise both himself and Mr. Sandow in the lay press.

DEATH CERTIFICATION.

To the Editors of THE LANCET.

SIRS,—Could you kindly inform me: 1. Whether it is a punishable offence according to the English laws to bury the body of a deceased person without the production of a burial order (from registrar or coroner, as the case may be)? 2. Is a certificate of the cause of death legally necessary for purposes of registration? If not, in what cases may it be dispensed with? 3. Did not a Royal Commission sit in recent years to consider matters relating to death registration and certification? Was any effect given to its recommendations? Were its conclusions published? And, if so, where may a copy be obtained?

I am, Sirs, yours faithfully,

E. S.

**** 1. To bury a dead body without a certificate is not by itself necessarily an offence but by the Births and Deaths Registration Act, 1874, Section 17, "a person who buries or performs any funeral or religious service for the burial of any dead body as to which no order or certificate is delivered to him shall within seven days after the burial give notice thereof in writing to the registrar and if he fails so to do shall be liable to a penalty not exceeding £10." 2. Speaking generally, a certificate of the cause of death is necessary, but cases may arise in which none is obtainable although they may not be such as to necessitate an inquest. In such cases the registrar may, presumably, register the fact of the death without any cause being certified by a medical man. 3. A committee sat and reported in 1902 on the law as to the disposal of the dead, for securing accurate record of causes of death, and detecting cases due to poison, violence, or criminal neglect. This was with a special view to legalise the performance of cremation and except with reference to cremation we are not aware that it had any result. The evidence and reports are to be obtained in a Blue-book, price 3s. 4d., through any bookseller. Our correspondent, probably with a concrete case in his mind, asks general questions with regard to a matter on which the law is not as definite or as stringent as it should be. Attention has frequently been called in THE LANCET to the need of fresh legislation on the subject of death certification and registration.—ED. L.

ANTI-RHEU-GEM QUACKERY.

A CORRESPONDENT has drawn our attention to the Christmas number of *Cassell's Magazine* on page xi. of the advertisements of which appears a notice of the Anti-Rheu-Gem Company, Birmingham. From this we learn that the company supplies, "Beautiful 9, 15, and 18 ct. gold jewellery which adorns the wearer and cures rheumatism, gout, and neuralgia." Further, "the remarkable relief and cures achieved by our patent jewellery has [*sic*] placed it high above competition. Every ring and bracelet we make contains the active principle and force of magnetism. The method of storing and controlling this power in jewellery is our exclusive patent." This jewellery is also stated to be recommended highly by the medical profession and besides testimonials from General This and the Hon. Lady That are appended two testimonials, one from Lieutenant-Colonel John Grieg, M.D., L.R.C.S., L.M., physician and surgeon, and another from H. McCloghey, Esq., M.B., Ch.B., Colonsay, Argyll. The Lieutenant-Colonel states: "It gives me the greatest satisfaction to professionally recommend your jewellery to all suffering from rheumatism," while Dr. McCloghey merely says: "I will be very pleased to recommend it." We think that the universities and diploma-granting bodies which gave to these gentlemen their degrees and diplomas should tell them not to recommend what is neither more nor less than a fraud.

THE QUEEN'S HALL CONCERTS.

THE symphony concert of Saturday, Dec. 10th, was a model of what a concert should be. It was not too long, the works performed were masterpieces, and the executants were admirable. Neither Mr. Wood nor, we might add, any other conductor can ever have secured a more perfect performance of the immortal B minor symphony of Schubert than was presented on the occasion under review. Miss Maud MacCarthy gave a charming, if distinctly feminine, rendering of the Beethoven violin concerto, and everyone knows how the death march from the Götterdämmerung is played at Queen's Hall. The last item on the programme was Richard Strauss's Tyll Eulenspiegel's merry pranks, which as we have only heard it twice, we do not feel competent to criticise. On Tuesday evening a testimonial concert was given to Mr. Robert Newman, to whom all lovers of music owe a debt of gratitude. The programme was exclusively taken from Wagner's works. The hall was well filled and the various items of the programme, which was too long, were rendered in the masterly way so well known to Queen's Hall audiences. The ventilation of the hall leaves much to be desired and we hope that the directors will take it in hand as soon as may be.

IZAL.

Messrs. Newton Chambers and Co., Limited, who have read the account of our Special Sanitary Commissioner's visit to the World's Fair at St. Louis, published in THE LANCET of Nov. 26th (p. 1527), wish us to make it clear that they are the owners and manufacturers of izal. They add that they went to a great deal of trouble to get up an original display at St. Louis which they are glad appealed to our Commissioner. We may remind our readers that in the report of a meeting of the Clinical Society of Manchester published in the same issue of THE LANCET is the account of a medical man's experience of treating ringworm with izal.

W.—For the Durham practitioner's degree our correspondent will find the following books useful: Osler's "Principles and Practice of Medicine (Kimpton, 18s.); valuable monographs upon special subjects in medicine will be found in Clifford Allbutt's "System of Medicine" (eight vols., 25s. each); Gowers's "Diseases of the Nervous System" (J. and A. Churchill); Parkes and Kenwood's "Hygiene" (Lewis, 12s.); Hamer's "Manual of Hygiene" (Churchill); Rose and Carless's "Manual of Surgery" (Baillière, 21s.); Sternberg's "Bacteriology" (Churchill); Green's "Pathology" (Renshaw, 17s.); Galabin's "Midwifery" (J. and A. Churchill); Herman's "Diseases of Women" (Cassell, 25s.); Judson Bury's "Clinical Medicine" (Griffin, 21s.); Treves's "Surgical Anatomy" (Cassell); Poore's "Medical Jurisprudence"; and Holt's "Diseases of Infancy and Childhood (Kimpton, 25s.).

Ars Longa.—If the offender is the patient our correspondent clearly must not betray professional confidence. If the sufferer is the patient it seems to us that the initiative in any action should be taken by her legal representatives. In that case our correspondent would be required to give, and would be right in giving, medical evidence.

Inquirer.—All ties of consanguinity increase the force of hereditary predisposition. If the parties are sound and have no such predisposition the distant relationship may be ignored.

M.B.—Will a correspondent writing upon asylum medical service send us his name and address which are not attached to his manuscript?

ERRATUM.—In a paragraph headed "Mr. Alabone and Mr. Stead," which appeared at p. 1692 of THE LANCET of Dec. 10th, the investigation into lachnanthes was attributed to Dr. A. C. Latham and "Dr. C. Slater." The latter name should have been *Dr. H. R. Spitta.*

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Northern Whig, Southern Times and Dorset County Herald, Westminster Gazette, Sussex Daily News, Dublin Times, Birmingham Post, Surrey Advertiser, Notts Guardian, Dublin Express, Bradford Observer, Hereford Mercury, Sanitary Record, Local Government Chronicle, Mining Journal, Hertfordshire Mercury, The Scotsman, Highland News, St. Petersburg Medicinische Wochenschrift, Isle of Man Times and General Advertiser, Evening News, Morning Leader, &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 15th, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 9	29·53	S.E.	...	47	47	33	36	38	Fine
,, 10	29·28	S.E.	0·08	49	49	38	46	47	Raining
,, 11	29·67	S.W.	0·05	49	49	35	34	35	Fine
,, 12	28·91	S.W.	0·09	60	48	34	41	42	Dull
,, 13	29·48	N.W.	0·02	47	45	39	39	40	Foggy
,, 14	29·54	S.E.	...	46	46	36	41	42	Overcast
,, 15	29·66	S.W.	0·25	53	46	39	40	41	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.).

WEDNESDAY (21st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (22nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9. 30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.).

SATURDAY (24th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (20th).—THERAPEUTICAL SOCIETY (Apothecaries' Hall, Blackfriars).—3.30 P.M. Council Meeting. 4 P.M. Papers:—Dr. N. Tirard: Some Clinical Observations with New Remedies.—The Secretary (for Mr. J. D. Gimlette, Kelantan, Malay Peninsula): Notes on some Methods employed by Kelantan Malays in the Treatment of Pūrū or Yaws.

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. L. S. Dudgeon and Mr. H. E. Russell: Experimental Grafting of Thymus.—Dr. W. E. Dixon: The Production of Leucocytosis by Colchicine.—Dr. T. G. Brodie and Dr. W. E. Dixon: Alterations in the Systemic Circulation which tend to produce Engorgement of the Lung Capillaries.

CHELSEA CLINICAL SOCIETY (Chelsea Dispensary, Manor-street, King's-road, S.W.).—8.30 P.M. Communication:—Dr. R. L. Bowles: The Treatment of the Apparently Drowned, with a Practical Demonstration of the Best Methods of Resuscitation.

WEDNESDAY (21st).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Paper:—Mr. J. W. Gordon: The Theory of Highly Magnified Images.

ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Great George-street, Westminster, S.W.).—7.30 P.M. Discussion on Mr. F. J. Brodie's paper on Decrease of Fog in London during Recent Years. Paper:—Mr. W. N. Shaw and Mr. W. H. Dines: The Study of the Minor Fluctuations of Atmospheric Pressure.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (20th).—NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Lecture-Demonstration:—Mr. A. de Prenderville: Anæsthetics.

GLASGOW OPHTHALMIC INSTITUTION (126, West Regent-street).—8 P.M. Demonstration of Ophthalmoscopic Cases, Stereoscopic and other Photographs, Pathological Specimens, and Microscopic Slides. Clinical Evening. Demonstration of the Micro-organisms found in the Conjunctival Sac. Demonstration of Patients:—Injuries of the Eyeball. (Post-Graduate Course.)

WEDNESDAY (21st).—HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Habershon: Methods of Physical Examination of the Chest, with Demonstration of the Uses of Auscultatory Percussion.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

Communications, Letters, &c., have been received from—

A.—Dr. Lombe Atthill, Monkstown; Dr. M. da Rocha Amorim, Entre-os-Rios, Portugal; Anglo-American Pharmaceutical Co., Lond.; Messrs. Adlard and Son, Lond.; Messrs. Arnold and Sons, Lond.; Dr. John Anderson, Glasgow; Mr. F. M. Aldred, Abergele.

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I.—Mr. W. B. Irving, Chorley.

J.—Dr. H. M. Joseph, Manchester; Dr. W. R. Jackson, Guilsborough; J. S. R.; Messrs. W. and A. K. Johnston, Edinburgh; Dr. Llewelyn Jones, Merthyr Tydfil.

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